CALIFORNIA

OIL WORLD

TWICE MONTHLY • SECOND ISSUE • DECEMBER 1949

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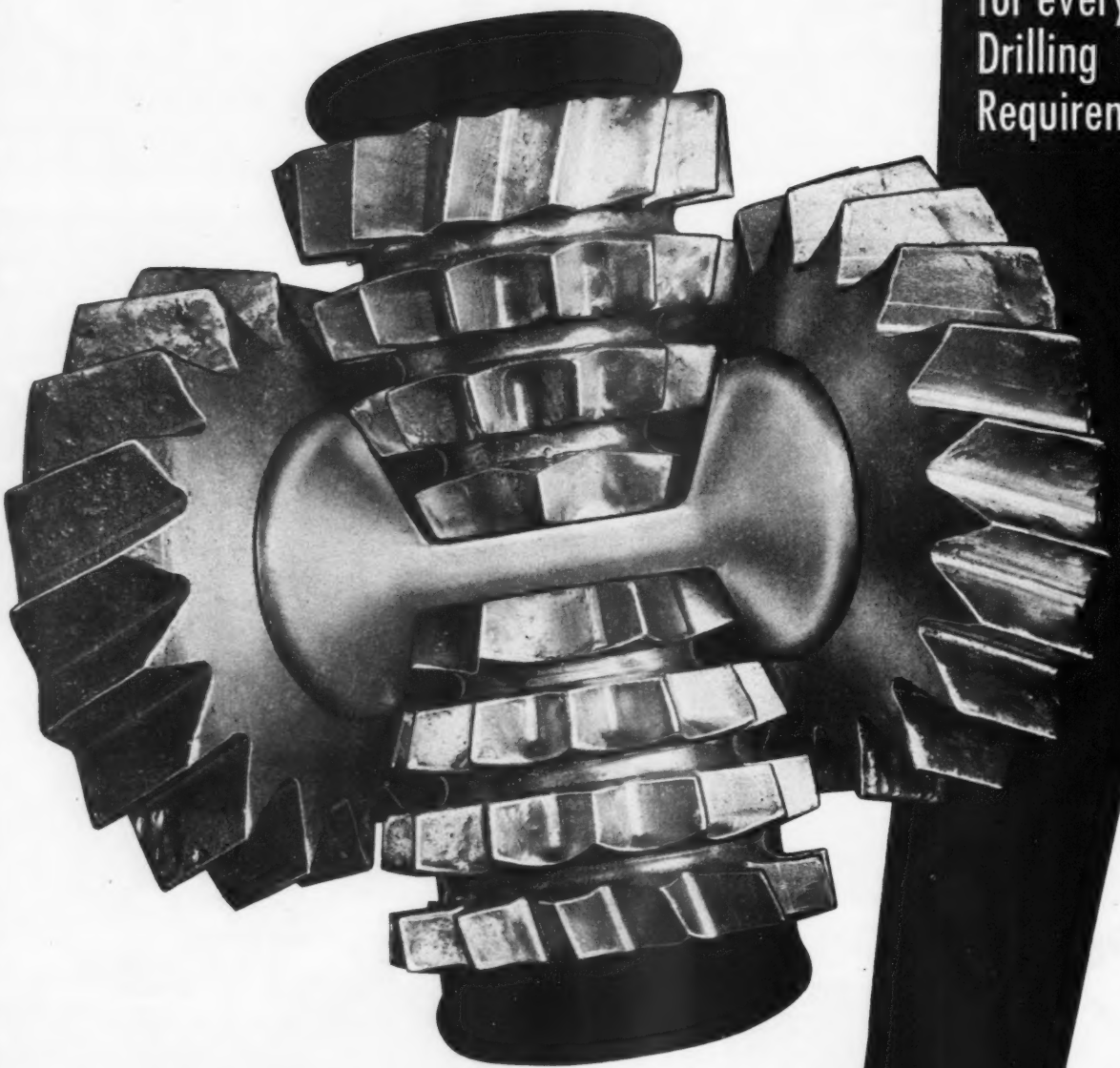

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CALIFORNIA
OIL WORLD

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Washington Highlights

Soaring Federal costs may turn "two Frankensteins loose in the land," higher taxes and inflation. These were the words of Herbert Hoover in a speech before the National Reorganization Conference. Appealing for Government reform, Mr. Hoover said that while economists say taxation beyond 25 per cent of the national income may bring disaster, Federal and local taxes now consume "far more than 30 per cent." The former President declared "We must conserve our strength and stop wasting our heritage if we are to survive as free people." Also concerned by Government spending, Senator Byrd, Democrat of Virginia, has issued a 4000-word statement calling for Government expenses of only $36,000,000,000 during the 12-month period, compared with the Senator's estimate that expenses for the fiscal 1950 will total some $43,500,000,000. Byrd said "It is apparent that the Federal Government is headed toward an extended era of chronic deficit spending which may continue until the public debt crushes us into national insolvency." Washington heard with interest a statement made in Los Angeles on U.S. spending by Reese H. Taylor, president of the Western Oil and Gas Association. Speaking at a Town Hall meeting in the Los Angeles Biltmore, Tayor declared increased production, not heavier Government spending and increased taxes is the solution to the country's economic mess. Taylor hit at "utopian" planers who advocate redistribution of wealth in this country and warned that such a system already is in existence in Russia, where individual initiative has been stifled. "If we took all the annual income earned by the people in this country who make over $500 per month and redistribute it," Taylor was quoted as saying, "it would amount to less than $15 per American, and we would have only that for the first year, because such a measure would completely dry up all capital investment and so destroy people's incentive to produce that our production for succeeding years would go steadily down hill." The oil executive stressed the danger of the national debt now besetting the country and the continued heavy peacetime spending.

The President's indicated program to boost tax revenues to be presented at the next Congress is likely to include a proposal to reduce the percentage depletion allowance of the current law. This warning was sounded by Russell B. Brown, general counsel for the Independent Petroleum Association of America in Washington. Depletion allowance has become an essential element in the entire economic life of the oil industry. Mr. Brown reasoned that any change in this provision would be far reaching and with disruptive results. He recalled that in 1942 there was a vigorous attempt to eliminate oil and gas depletion allowance entirely. Only by the inherent soundness and justification of the depletion allowance provisions of the law was the attack warded off, the IPAA counsel remarked.

February 6, 1950, is the date set by the Supreme Court on which it has agreed to hear arguments on two suits in which the Federal Government is endeavoring to obtain possession of oil-bearing tidelands off the coasts of Louisiana and Texas. The court's action in effect turns down a Louisiana request that the suit against it, if not dismissed, be decided by a jury trial. Seldom has a jury trial punctuated history of the high court.

Senator Taft, Republican of Ohio, has called for a "perfected and improved" Taft-Hartley labor law as one of the planks in a Republican platform for the election in 1950.

Senator William Knowland, Republican of California, charged that the Far East division of the U.S. State Department was largely responsible for the "catastrophic events now taking place in China." Knowland recently completed a month's tour of the Orient.

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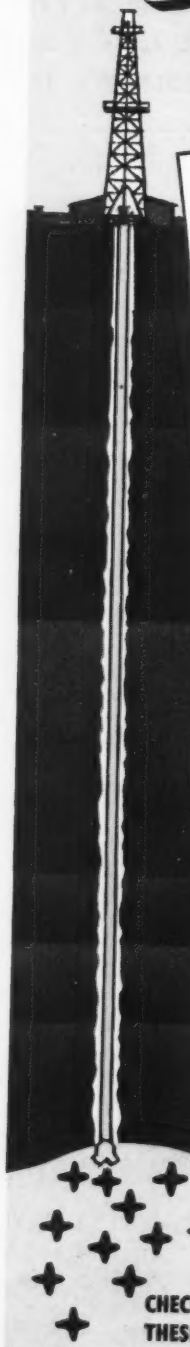

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Details of Conversion of an Atmospheric Cooling Tower to Induced Draft Operation

By RAYMOND TODD
Chief Engineer, Pacific Lighting Corp.

December Meeting

During the past summer Pacific Lighting Corporation has completed the reconstruction of a 29 bay atmospheric type cooling tower so as to convert it to induced draft operation. This tower is part of the facilities installed at the Goleta Gas Storage Field, located approximately 8 miles north of Santa Barbara.

Several reasons prompted consideration of revisions in the atmospheric cooling facilities which existed at the Goleta plant.

First, the unsightly appearance of the existing tower detracted from the overall appearance of the plant facilities.

Second, the high cost of maintenance of the surrounding plant facilities due to the water spray from the cooling tower. The tower was located on the windward side of the main compressor building, and, therefore, the trench piping and other equipment around the plant were continually exposed to the cooling tower spray.

Third, the large amount of water wasted from the atmospheric tower in the form of spray and wind loss. A check of our plant operating data indicated that cooling tower spray and wind loss at times amounted to as much as 25% of the total plant water consumption. Wind loss from the tower with only a moderate wind has amounted to as much as 30,000 gallons of water per day. In view of the difficulty in developing water in this area, such a large loss of water was of major importance and, therefore, was one of the primary reasons which prompted us to consider the revision of the cooling facilities.

Fourth, the cooling capacity of the atmospheric tower was inadequate under certain atmospheric conditions.

Inasmuch as these cooling tower problems are common to the operation of most atmospheric towers, it was felt that a brief presentation of the changes which were made in our facilities to overcome these difficulties might be of benefit to others.

The cooling facilities at Goleta are a part of the compressor and dehydration plants which were installed in conjunction with the injection and withdrawal of natural gas in underground storage. The tower provides cooling for several different operations consisting of:

(1) Cooling of gas which is withdrawn during the winter time.

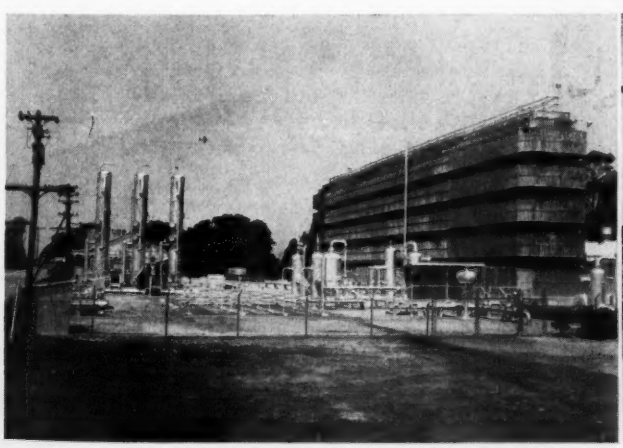
(2) Cooling of compressor engine jacket water while gas is being injected for storage during the summer.

(3) Cooling of diethylene-glycol in conjunction with the dehydration of gas during periods of withdrawal.

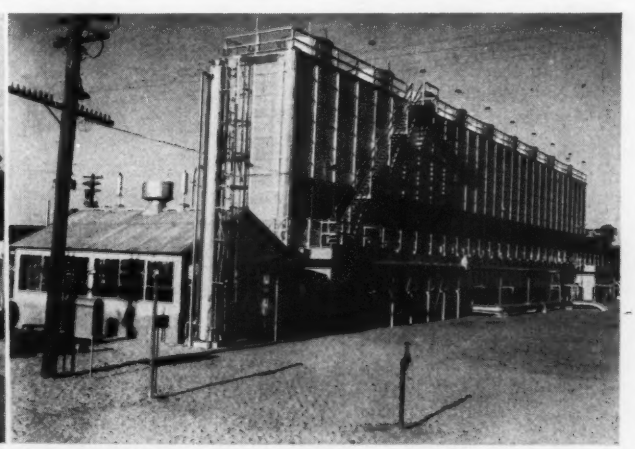
The original cooling tower installed at Goleta was constructed in 1939 and consisted of 6 bays. As the Goleta storage project developed and facilities were extended, this original tower was added to until in 1948 it consisted of 29 bays, was 179 ft. in length and 43 ft. in height including the coil shed. The cooling tower itself was 12 ft. in width and was installed over a coil shed which housed the cooling coils for the various services.

In endeavoring to arrive at the most economical means of solving the problems presented by the atmospheric cooling tower at Goleta, consideration was given to the following types of installations:

One possible solution of the problem was to install radiator type cooling. This type of cooling is very desirable inasmuch as it entirely eliminates the use of water as the facilities consist of fans blowing air across the extended fin coils. A disadvantage of this type of cooling is that it generally is not practical for



View of old atmospheric tower prior to time conversion work was performed on it.



Various views of the tower following its conversion from atmospheric to induced draft operation.

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cooling services where temperatures lower than 15° above the ambient air temperature are necessary. The jacket water cooling at Goleta met these requirements. However, cooling of gas and glycol during withdrawal periods did not come within this temperature range, and, therefore, some other type of supplementary cooling would have to be provided. Inasmuch as the atmospheric tower was unsatisfactory, it did not seem advisable to maintain a portion of it for the lower cooling requirements. The only alternative would be to install an induced draft tower in the location of a portion of the present atmospheric tower and utilize a portion of the present cooling tower basin. This would eliminate the necessity of relocating and repiping the gas and glycol cooling coils. Such an installation, it was estimated, would cost $60,000.00. The radiator type cooling equipment for jacket water would cost, completely installed, along with necessary piping, $45,000.00, which would make a total cost of $105,000.00 for these cooling facilities.

A second possible solution would be to install a new induced draft cooling tower for all cooling requirements. Our operating conditions at Goleta made it impossible to install a new induced draft tower in the location of the present atmospheric tower. An induced draft tower to handle all cooling requirements would consist of three (24′ x24′) cells and would cost, completely installed, with concrete basin, approximately $60,000.00 The installation of the jacket water and gas cooling coils in a new induced draft tower along with necessary piping would cost $36,000.00, or a total cost of approximately $96,000.00.

The third solution would be to alter the present cooling tower to convert it to induced draft operation. Inasmuch as the structural portion of the existing atmospheric tower and the concrete basin were in good condition, it was felt that consideration should be given to converting the present tower to induced draft operation. The above figures show that the installation and repiping of the cooling coils in the new induced draft tower amounted to over 1/3 the total cost, and, therefore, if this work could be eliminated, a major saving could be effected. In view of this apparent saving, preliminary estimates were made covering the costs of converting the atmospheric tower to induced draft operation. These estimates indicated that the tower could be reconstructed for approximately $55,000.00. In view of the large difference in cost between this method of solving the cooling problem and the other possible installations, it was decided to proceed with the detail design of the reconstruction of the atmospheric tower.

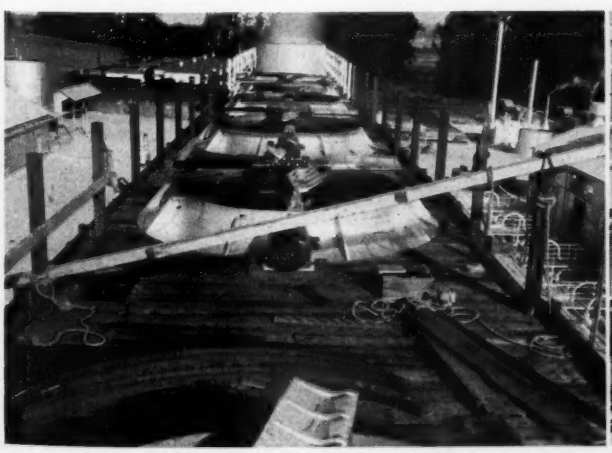
In order to be assured that the conversion of the tower would solve the various problems with which we were confronted, the following requirements were set up.

(1) The wall of the tower was to be of double construction with the inside surface of 1″ T&G Redwood and the outside surface of ⅜″ waterproof plywood. These two surfaces to be separated by air space 1¾″ wide. The air space was to be continuous and open at both top and bottom so as to prevent any carryover of moisture from the inside wall to the outside wall. Recent experience in maintaining the exterior surface of induced draft cooling towers had shown that a plywood surface stood up better and presented a better appearance than a surface of 1″ T&G.

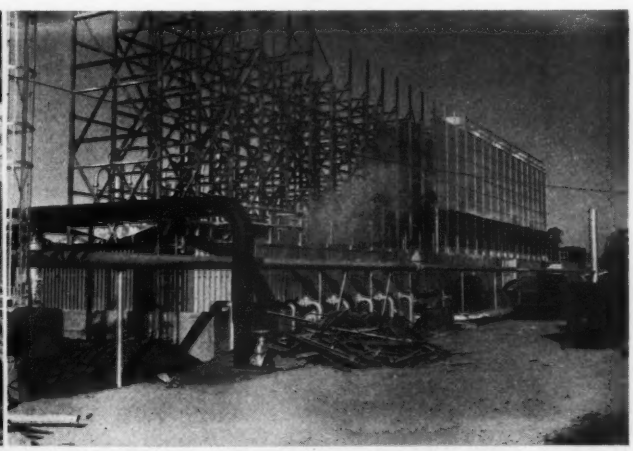
(2) All joints on the wall panels for the cooling tower structure which extended to the outside were to be sealed by mastic in order to eliminate any possible leakage of water.

(3) In order to assure ourselves that the construction of the tower would be waterproof in all respects, we specified that the exterior of the tower should be free from any leakage for a period of one year and in the event leaks did occur, the contractor would make the necessary alterations to repair such leaks at his own expense.

(4) The performance of the cooling tower was to be guaranteed to cool 3,000 gallons of water per minute from 88°F. to 73°F. with 66°F. wet bulb temperature. These were the same cooling specifications for which the atmospheric tower was designed with the exception that they were based on a 3 mile an hour wind through the tower. There was

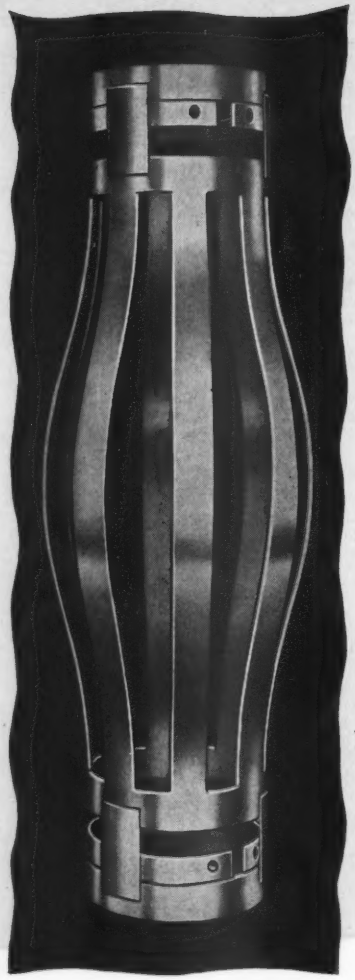


View along fans on top of cooling tower during the installation of the fans on second half of the tower.



View of structural portion of second half of cooling tower to be worked upon.

"TORTURE TESTING" definitely proves Baker Model "G"



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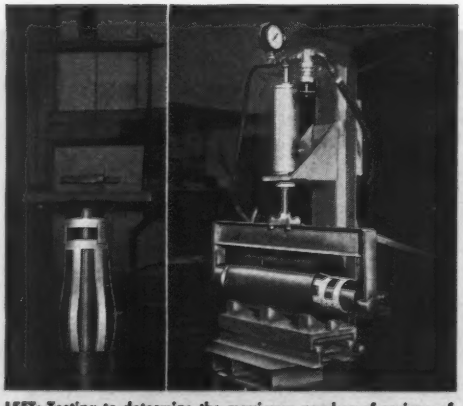
Only when "maximum centering force" is applied to casing at the cementing point, can you obtain a sufficient annular space to permit uniform distribution of the cement slurry completely around the casing. The hazard of channeling is minimized, and chances for successful "first time" cementing are increased.

The test of any casing centralizer is its ability to exert MAXIMUM CENTERING FORCE *after* repeated flattening of its springs during the trip down-hole. That's why the Baker testing laboratory has been kept in constant use during the designing, development and actual proving of the Baker Model "G" Casing Centralizer. Comprehensive tests, simulating every conceivable hole condition to which a centralizer is subjected, were performed in arriving at its efficient design.

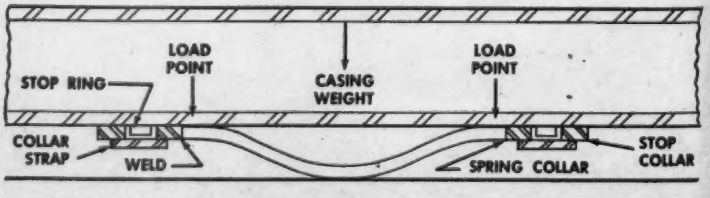
During the course of these tests, every type of spring-equipped centralizer was studied. The exclusive design of the Baker Centralizer proved conclusively to be the optimum.

And here are the outstanding features of the Baker Model "G" Casing Centralizer confirmed by "torture testing" . . . 1. Its MAXIMUM CENTERING FORCE is exerted when it reaches the cementing point, regardless of how many times the springs have been flattened due to "dog legs" or tight spots in the hole. 2. The springs are securely butt-welded to the spring collars in a design that imposes the load point *upon the casing.* 3. *All springs compress simultaneously,* and cannot be compressed individually. 4. The *casing can be rotated* while the centralizer remains stationary. 5. It starts easily, without "snubbing." 6. All parts of the assembly are pre-positioned, ready for immediate, easy installation on the casing.

Ask any Baker representative or office for *your* copy of the new 16-page brochure which contains complete details and illustrations of the Baker Model "G" Casing Centralizer.



LEFT: Testing to determine the maximum number of springs of optimum bowed height to permit easy starting without "snubbing." RIGHT: With this testing device it is possible not only to simulate rugged down-hole travel by repeatedly flattening the springs, but also to find the effective centering force of the centralizer in the open hole after such treatment. The MAXIMUM CENTERING FORCE can easily be determined from a performance curve showing the centering force at various intervals of deflection.



Here is the ideal in spring design and mounting, found only in the Baker Model "G" Casing Centralizer. Note how the load point is imposed directly upon the casing; and how the properly "contoured" spring is free to move along the smooth surface of the casing as it deflects under compression. There is no chance for concentration of stress to cause a permanent set, or breaking of the spring. Note that ample clearance exists between Stop Rings and Centralizer Collars to accommodate the increased length of the springs that results from their complete flattening.

***Remember!* You get MAXIMUM CENTERING FORCE only with BAKER Model "G" CASING CENTRALIZERS**

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to be incorporated in the guarantee a set of performance curves which would set forth the guaranteed performance for all wet bulb temperatures within a specified range.

In order that the tower structure carry the added loads imposed on it by the fans, their operating equipment, and the additional wind load resulting from the side of the tower being covered solid, it was necessary to reduce the overall height of the original tower by 8 ft. and improve the joint efficiency in the diagonal bracing. This was accomplished by installing brass gusset plates between the diagonal bracing and the vertical members in the cooling tower. Later pictures will show the details of these gusset plates.

In view of the 12 ft. width of the original cooling tower, the maximum size fan which could be installed was 8 ft. in diameter. In order to meet the cooling conditions, it was necessary to install nine fans on top of the tower, each one drawing air through a separate cell. The two end cells on the tower were 12 ft. x 24 ft. while the remaining seven cells were 12 ft. x 18 ft. The end cells, being larger, required more air to be drawn through them, and, therefore, the fans on these cells were driven by a 15 H.P. motor whereas the remaining seven fans were driven by 7½ H.P. motors.

The cooling tower fan motors were to be controlled from a central panel board located in the auxiliary room adjoining the main compressor engine building. This panel board, in addition to starting and stopping switches for each individual motor, was to be equipped with lights which indicated which fans on the tower were in operation. It was also necessary to provide for disconnect switches at the individual motors to prevent their being started by the remote control switch during the time the fan mechanism was being worked on.

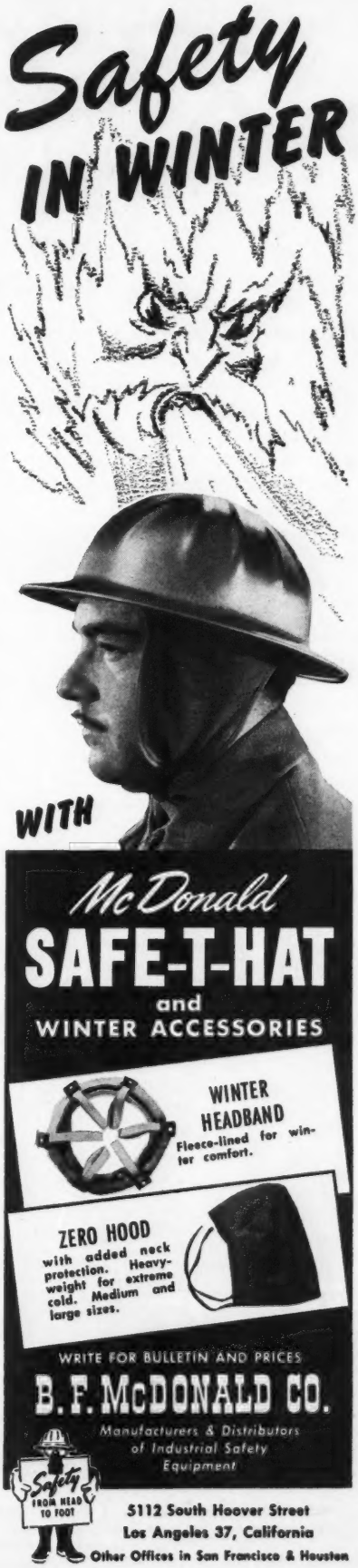
Inasmuch as the fill in the old atmospheric cooling tower was designed for a horizontal passage of air through the tower instead of the vertical movement of air which occurs in an induced draft tower, it was necessary to remove all of the fill from the tower and replace it with a new fill which was designed for induced draft operation. It is generally agreed that it would have been impossible to utilize the old fill material in converting the tower to induced draft operation.

Following the working out of the details in connection with converting the tower, the tower supplier furnished us with a proposal whereby they agreed to perform all work in connection with the conversion of the tower to induced draft operation for a fixed price with the exception of the cost of removing the old exterior surface of the original tower and the removal of the fill in the tower. This work was performed on a cost plus basis in view of the indefinite amount of work which would be involved in the removal of the exterior surface and the tower fill.

Inasmuch as we could not take the entire cooling tower out of operation for a period long enough to perform the conversion work, we specified that only one-half the tower could be converted at a time and the work on the first half of the tower would have to be completed before work could be started on the second half. The conversion work was started about the first of May and required a period of approximately two months. Following the completion of the conversion of the tower, performance tests were made on the tower to determine if the tower met the guaranteed conditions. These tests indicated that the cooling tower, when operating within the range of the performance curves, gave approximately ½° closer approach to the wet bulb than was required under the guarantee.

Final costs of all work performed in connection with the conversion of the tower to induced draft operation show that the complete job, including all electrical work and painting the completed tower, amounted to $62,275.00.

The cost of the electrical installation including motor controlling equipment, wiring, etc. was approximately $4,000.00, which, if omitted from the above figure, would leave a net cost for the actual conversion of the tower of $58,275.00.



Rocky Mountain NEWS

Colorado—Idaho—Montana—New Mexico—Utah—Wyoming—Western Canada

Western Nebraska

A new wave of oil excitement rippled across the wheat stubble of western Nebraska as Ohio Oil Co. tested up to six million cubic feet of natural gas daily at its wildcat in the Huntsman area, six miles south of the new Gurley field. The No. 1 Cruise in 7-14n-49w tested at the rate of 4,050,000 cubic feet of gas in a 45-minute drillstem test of the Third Dakota sand between 4751-4761 feet. Flowing pressure ran from 750 to 1,080 pounds. The venture was the first to indicate commercial production outside the Gurley pool, and is scheduled to drill to granite around 8,000 feet. In the First Dakota, between 4650-4660 feet, it made 100 feet of 38.8 gravity oil in a 45-minute test.

The first deep test in Duel county got under way in mid-December near Chappel, close to the Colorado-Nebraska border, when B. B. Carter Drilling Co. of Cheyenne set surface pipe at a well on the Schwartz farm.

Another encouraging development occurred in the Cottonwood area of Dawes county, where H. L. Hollingsworth, Matt Newell et al recovered 660 feet of oil and gas cut mud in a 1-hour stemtest from 2478-2491 feet. The light green, paraffin base oil, apparently high gravity, came from the first bench of Dakota. The well, No. 1 Neeland in section 30-30n-48w, is more than 90 miles north of Ohio's Gurley pool and is midway between Alliance, and Chadron on the north side of the Julesburg Basin.

Other developments are expected to crop up in the near future in this new oil province, which takes in the southwest corner of Nebraska, northeast corner of Colorado and southeast corner of Wyoming—known as the Julesburg Basin.

E. K. Carey Drilling Co. of Denver is scheduled to drill a Dakota test on a 12,000 acre farmout from Bay Petroleum northeast of the town of Sterling in Logan county, Colorado.

Carter Oil Co. moved in rotary for a 5700-foot Lakota sand test in the Fort Morgan area in Morgan county, Colo., which marks the firms first entry in the Julesburg Basin play. Ohio is said to have holdings in this area between Sterling and Fort Morgan.

A dazzling spectacle by night is Continental Oil Co.'s new catalytic cracking plant in Billings, Mont., which went on full stream at the end of October. Brilliant lighting marks the outline of the catalytic cracking tower in the center—a notable addition to the industrial skyline of the Rocky mountain region.

Western Canada

Stage Three: A big tanker truck loaded with diesel fuel oil rolled up to the Canadian-American border at Whitetail, Montana recently. Unlike thousands of its predecessors, it was headed south, not north. Bearing a load from the refinery at Moose Jaw, Saskatchewan, the trucker paid the quarter-cent a gallon duty and rumbled on to his destination at the Montana-Dakota Utilities power plant in Scobey, Mont.

Canadians saw in the lone, southbound truck a symbol of future movements of crude to markets south of the border, reversing the long-standing dependence of Canadian consumers on production in the states.

But the economic valves turning in a flood of Canadian oil into U. S. markets were not yet ready to be opened; the prairie provinces had reached that painful stage in the history of new oil country when local supply far exceeds home markets, when oil is held back in the

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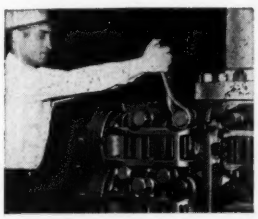
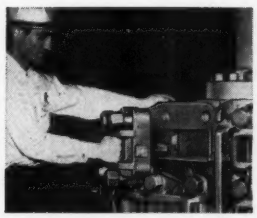
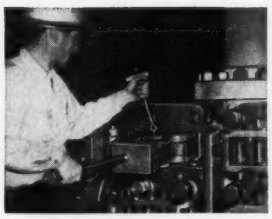


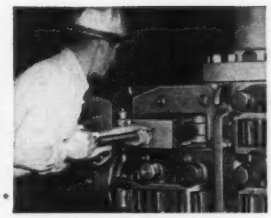
1. Unbolt Two Doors in the side of the Gate. You don't even have to remove the bolts—they remain in the doors where they can't become lost.



2. Swing the Doors Open and pull out the ram assembly. There's nothing to loosen, unlock or disengage. It slides right out.



3. Lift the Rams from the Gate and simply replace the Ram Blocks and rubbers with others of the desired size and type.

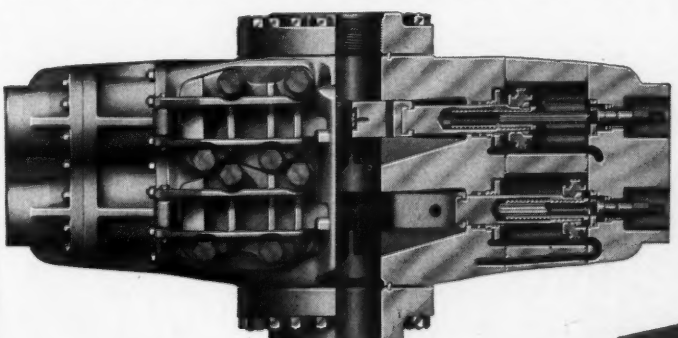


4. Slide the Ram Assembly back into the Gate, close and bolt the doors. Closing the doors automatically aligns Ram Assemblies within Gate.

It's as simple as that—and as fast. And here's another important feature—you can make a complete ram change *whether the pipe is in or out of the hole!*

Best of all the unusual speed and simplicity with which rams can be changed is only one of *many* vitally important advantages that Shaffer engineers—pioneers in the development of high pressure control equipment—have incorporated into the Shaffer Hydraulic Cellar Control Gate. A few of the many other features are outlined at right. But be sure to get the *complete* story before you buy *any* cellar control gate equipment. No other equipment provides so much protection—in such a compact space—with so many operating advancements as . . .

The SHAFFER HYDRAULIC CELLAR CONTROL GATE!



The sectional view above shows how two separate ram compartments are unitized into one compact body. Note the self-draining bottoms of the ram compartments . . . the direct hydraulic drive . . . and the completely enclosed design of the Shaffer Hydraulic Cellar Control Gate!

Write for the new Shaffer 1950 Catalog that gives full details on the Shaffer Hydraulic Cellar Control Gate as well as on other Shaffer products!

See pages 4433 to 4496 of the 1950 Composite Catalog.

Additional unique features in the Shaffer Hydraulic Cellar Control Gate

- **SPACE SAVING COMPACTNESS:** *Two separate ram compartments are unitized into one body, yet the overall height of the entire Gate, including both compartments is only 30" even in sizes as large as 13⅜".* Smaller sizes even less!
- **COMPLETELY ENCLOSED DESIGN:** All moving parts, including piston rod ram shafts, are completely enclosed within the body of the Gate. No moving parts project from the Gate—nothing to become damaged or wedged by falling objects or loose timbers in the cellar, nothing to become corroded by salt fluids or chemical muds dripping into the cellar. This means greater safety, less maintenance!
- **DIRECT HYDRAULIC DRIVE:** Hydraulic operating cylinders *are directly behind* the rams for direct action, maximum simplicity, greatest safety. No secondary connections between hydraulic cylinders and rams!
- **SELF-DRAINING BODY:** The rams travel on high narrow guide ribs raised above the steeply-sloped bottoms of the ram compartments. Mud and sand quickly drain back into the well—no detrimental accumulations to interfere with free operation of the rams!

These and still other unique features make the Shaffer Hydraulic Cellar Control Gate the outstanding *hydraulic* gate available today. Get full details from your Shaffer representative—or write direct!

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Get full details on these Instruments and Services now.
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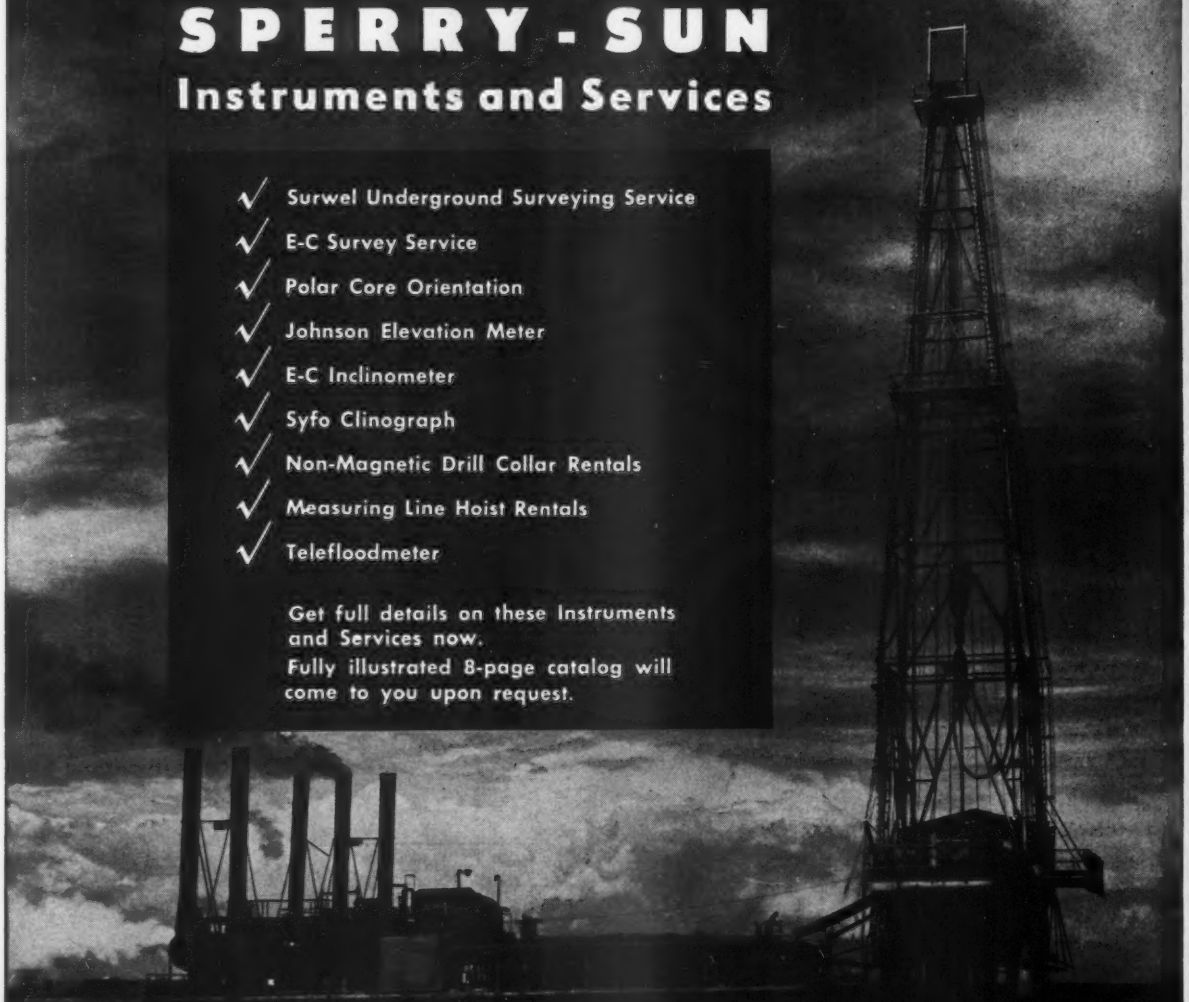

SPERRY-SUN WELL SURVEYING COMPANY
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Oklahoma City, Okla. Lafayette, La. Bakersfield, Calif. Moulden Oil Field Services, Casper, Wyo.

ground until pipelines can be built to distant markets.

The first corner had been turned when production was established some years ago in the Turner Valley field in Alberta, ushering in the period when local supply could not begin to meet local demand. This spurred exploration, brought on Imperial's discovery of the lush Leduc field—and soon imports from the states to western Canada became a mere trickle as late as 1948.

Then came Stage Three, the period of abundance coupled with restricted markets. Companies large and small continue the search and development of new reserves. Wells must operate below their maximum efficiency, production is choked down, investments are tied up, and a certain amount of bickering goes on between companies and the government.

Stage Four will be ushered in with completion of the multi-million dollar interprovincial pipeline from Alberta to the head of the Great Lakes, prior to the shipping season of 1951. Then, oilmen believe, will come the real boom in western Canada.

Even so, Canada is not expected to reach a large exporting position for at least 10 years. Speaking in Vancouver recently, M. L. Haider, production chief for Imperial Oil, commented that the dominion should be producing enough oil a decade hence to supply all of her needs and still have "a little left over for export."

"Although it is crystal gazing a bit," Haider said, "we should be self-sufficient by 1960 on the basis of a five billion barrel oil reserve and a 6% annual production increase."

The Canadian market absorbs 320,000 bbls. per day. In 10 years, Haider predicted, Canada will reach total production of 400,000 bbls. per day.

"Canadians should get over the idea that Alberta is another Texas," he continued. "The prairies have an oil reserve of only one billion barrels, while Texas has 10 billion. The oil bearing area in the whole of Canada is only one-third that of the United States."

His estimates differed sharply from some more enthusiastic oil soothsayers who predicted Canadian reserves would ultimately surpass combined reserves of Texas, Oklahoma and California.

The general expectation is that prices for Alberta crude will drop at the well head in order to compete with imports at Great Lakes ports when the new pipeline is completed. Increasing markets, however, are expected to compensate for the drop in price.

At the present time imported crude is being laid down at the Sarnia, Ontario refinery at around $3.55 per barrel. Crude in the Leduc field brings $3.20 a barrel at the well head. To this must be added a 10 cent a bbl. gathering charge, 55 cents a bbl. pipeline transportation tariff and 30 cents a bbl. shipping charge by tanker, making the delivered figure $4.15 a bbl. Redwater crude starts at $2.88 a bbl. in the field and would cost $3.83 delivered at Sarnia.

It would take a drop of around 30 cents a barrel at the well head to place Alberta crude in a competitive position.

Meanwhile, it is considered likely that posted prices of crude oil in the U. S. may be revised downward in the next two years, which would force a corresponding reduction in the prices of Canadian crude.

Completion of the pipeline from Edmonton to Superior, Wis., is expected late in 1950, with first shipments of crude moving by tanker across the lake in the spring thaw of 1951. Loren F. Kahle, president of the Interprovincial Pipeline Co., told Calgary Rotarians early in December that the pipeline would provide an added income of $3,000,000 per month to Alberta oil producers.

Evidence of mounting exploration activities for 1950 in the prairie provinces is found in the number of geophysical parties working during the winter months. A total of 110 parties of seismograph, gravitymeter and magnetometer operators were counted early in December, compared to a peak of 65 last year and only 15 in 1947.

Alberta had 81 geophysical parties while new efforts in Saskatchewan were reflected in operations of 27 parties. Manitoba had two in the field.

Recently Tide Water Associated engaged four seismograph crews to shoot profiles over its nine million acre holdings of crown permits in Saskatchewan. The company completed an aero-magnometer survey which covered 18 million acres in the province. The airborne survey was flown by a Canadian affiliate of Geotechnical Corp., Dallas, Texas.

Tide Water represents a group of firms in the Saskatchewan play, including Atlantic Refining of Philadelphia, Columbia Carbon of New York and the Barnsdall-Honolulu-Seaboard oil group.

R. M. Churchwell, petroleum engineer for Ohio Oil Co., in Casper, dictates a letter to Mrs. Elda Johnson, attractive stenographer, in his office in the firm's new headquarters.

"CBV" COMBINATION BALANCED VALVES

For Precision in Gas Regulation!

The right gas pressure with continuous control is a prime need supplied by the "CBV" type regulators. These are combination balanced valves built in two interchangeable styles—either offset connected or direct connected.

The offset model allows easy access to inner valve assembly through a hand hole plate. It does not require removal of the entire superstructure to examine or change the valve assembly. In changing from a high to a low pressure regulator, the diaphragm chamber unit is replaced and the rocker arm shaft is changed to a low pressure rocker arm shaft. The offset connected style has a fulcrum between the diaphragm and valve assemblies.

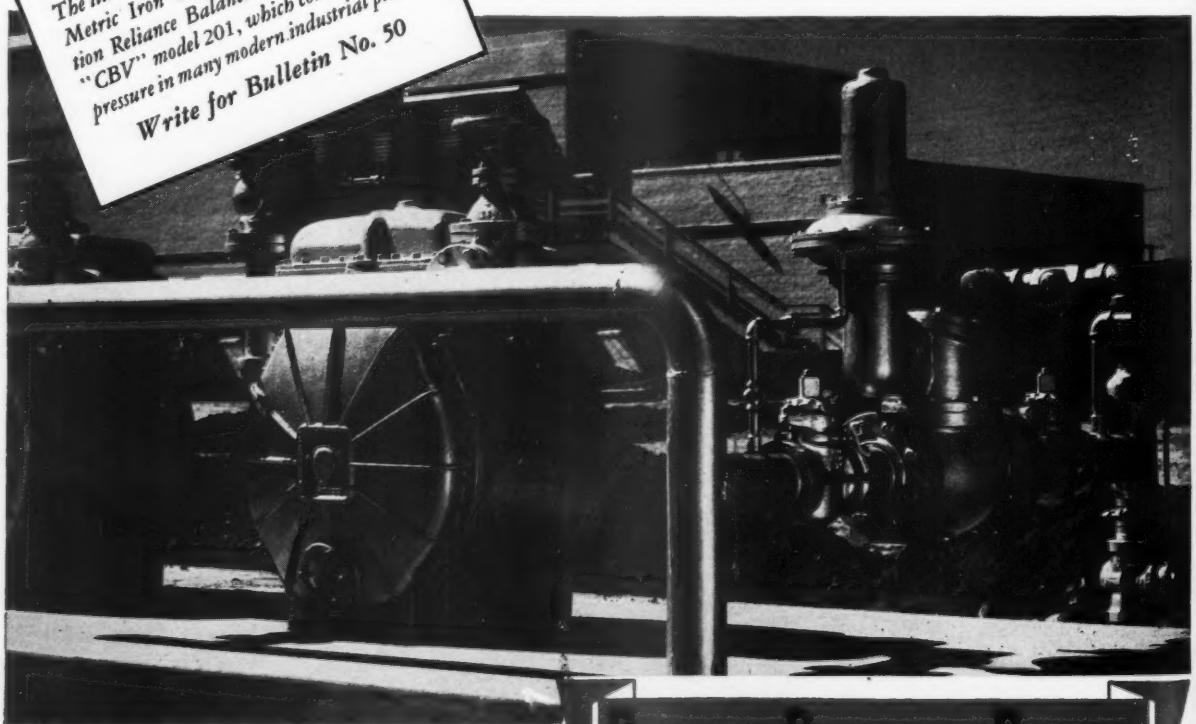
In the direct connected regulator, the diaphragm assembly is connected straight through to the valve assembly. It comes in three optional types: the high pressure weight-loaded; spring-loaded; or pilot-loaded. This model also has interchangeable parts which permit switching to a spring or pilot-loaded assembly. The change is made by replacing the pressure lever cap with the spring housing unit or with the pilot cap. These quick and easy changes help to meet new needs and specifications.

Both offset and direct connected models are offered in high pressure weight-loaded, spring-loaded, or pilot-loaded types. Low pressure models are pilot-loaded or weight-loaded, either inside or outside weights being available. Semi-low pressure regulators are made in pilot-loaded or outside weight-loaded types. The low pressure and semi-low pressure regulators are offered only in the offset style. A 3.4 to 1 ratio is maintained to provide better lock-up under low pressures.

Valve body castings are the same for either high pressure or low pressure types. A free flow of gas is provided at the point of expansion and body friction is reduced to a minimum. Directional flow arrows are cast into both sides of valve body castings for the user's convenience.

The illustration below shows an American Metric Iron Case Meter and combination Reliance Balanced Valve Regulator, "CBV" model 201, which controls the gas pressure in many modern industrial plants.

Write for Bulletin No. 50



American Meters

RELIANCE REGULATOR DIVISION

AMERICAN METER COMPANY
INCORPORATED

1000 MERIDIAN AVENUE, ALHAMBRA, CALIFORNIA

Wyoming

Steelco Drilling Co.'s strike on the north outskirts of Glenrock spotlighted oil developments in Wyoming during December. The Chicago firm logged 25 feet of good saturation in the Muddy sand between 7202-7226 feet. Light green high gravity oil flowed with high pressures in a brief drill stemtest, but no gauge was taken. Casing was run thru the sand and perforated. The well was shut in after cleaning the oil and mud out of the hole, and further testing was postponed until storage tanks could be erected.

Jack Steele, president of the firm and a former rum importer, said estimates of open flow potential ran as high as 4,000 bbls. per day.

Phillips Petroleum, which holds leases in the central Wyoming town and all around it, started an offset test a quarter-mile east of the Steelco discovery, and Steelco rigged up for an offset on the Robbins ranch a half-mile to the east. These two offsets probably will test sands below the Muddy, including Dakota and Lakota.

Excitement reigned in the normally quiet town of Glenrock. Tax title town lots which had sold for $25 each a few months ago averaged $640 at a county sale. Still there was no town lot drilling in Glenrock. The town council passed a temporary ordinance banning the practice until a permanent ordinance could be drafted. The temporary ordinance provides a fine of $25 to $100 per day for drilling inside the town limits, with no assurance that the injunction method might not be used to tie up a lot drilling operation. So lot drillers are biding their time.

Lease brokers jammed the Converse county seat at Douglas looking up old land titles, and one broker even went to the district land office to file on the North Platte river bed running past the town of Glenrock. But his lease application conflicted with a patented title to the mineral rights.

The county of Converse came in for a share of revenue. It was discovered that the old Glenrock Coal Co. had deeded a 100-foot strip of land to the county in 1902 for a road to a mine. The mineral rights had not been reserved. So the county proposed to auction the subsurface rights on this strip, comprising a little over 19 acres, to the highest bidder.

Continental's Glenrock refinery, only a quarter-mile from the discovery well, might well be sitting over the new pool. The refinery occupies a 10-acre site, and it is considered likely Conoco will either lease this for a well or drill one itself.

One of the best-known lease brokers in the state, Ross Gardner, had conducted his operations for many years from an office in Glenrock. He was in Florida when the boom broke and had not acquired any leases in the town or immediate vicinity.

P. D. Mellon Appointed Fluor Representative For Western Canada

P. D. Mellon, Calgary, Canada, was recently appointed Canadian representative for The Fluor Corporation, Ltd.

P. D. Mellon

Presently associated with the Calgary and Emerson Gas Company, Mellon has a background of thirty-three years' experience in the gas industry. With offices at 215 Sixth Avenue West, Calgary, Alberta, Mellon will be the first permanent resident to represent Fluor in petroleum and allied industry design, engineering, and construction projects in Western Canada.

The discovery naturally excited interest anew all along the southern edge of the Powder River Basin. One seismograph crew was reported shooting profiles along the northern front of Casper mountain, where a huge fault is known to exist.

A woman attorney, Mildred Barber, was the only member of the legal profession doing business in Glenrock when the oil boom opened. Her office was swamped, and she estimated it would take lawyers at least 25 years to get the legal tangle of tax title lots and disputed deeds unsnarled.

Over in the southeast corner of the Powder River Basin, Atlantic Refining Co. recovered a surprise show of oil in the Upper Sundance at its No. 1 Joss in the Lightning Creek area. The well, a joint operation with J. M. Huber Corp. offsetting a discovery which had pumped 300 barrels of high gravity green oil on completion a few weeks ago, was considered a sure shot for production in the Basal Sundance. The discovery well had been completed in Basal Sundance. But on drilling down another 100 feet, the operator met with disappointment. The lower sand tested water. Now the well in section 1-34n-66w is being carried deeper to the Leo sand. If no shows are found in Leo, it may be completed as a small pumping well in the Upper Sundance between 3760-3796 feet. This area southwest of the Lance Creek field has appeared promising ever since Atlantic brought in the discovery last September.

MacKinnie Oil and Drilling Co., headed by James Donoghue of Denver, moved in for another test in this area at the No. 1 Francis Mulligan in 12-34n-66w, one mile southeast of Atlantic's current test. Further drilling is anticipated in the area.

Other developments continued to center attention on the Powder River Basin as a whole in December.

Delhi Oil Corp. of Dallas recovered 1470 feet of clean oil in a test of the Sussex sand at an extension well one and one-half miles south of production in the Sussex field in Johnson county. The one-hour test was made between 3954-3974 feet.

. . . job-engineered for medium drilling

Plenty of power . . . and speed. You get both in the National "Ideal" T-25 Rig. The rig that's job-engineered to drill to 4 and 5 thousand feet fast, economically.

Look at these features . . .

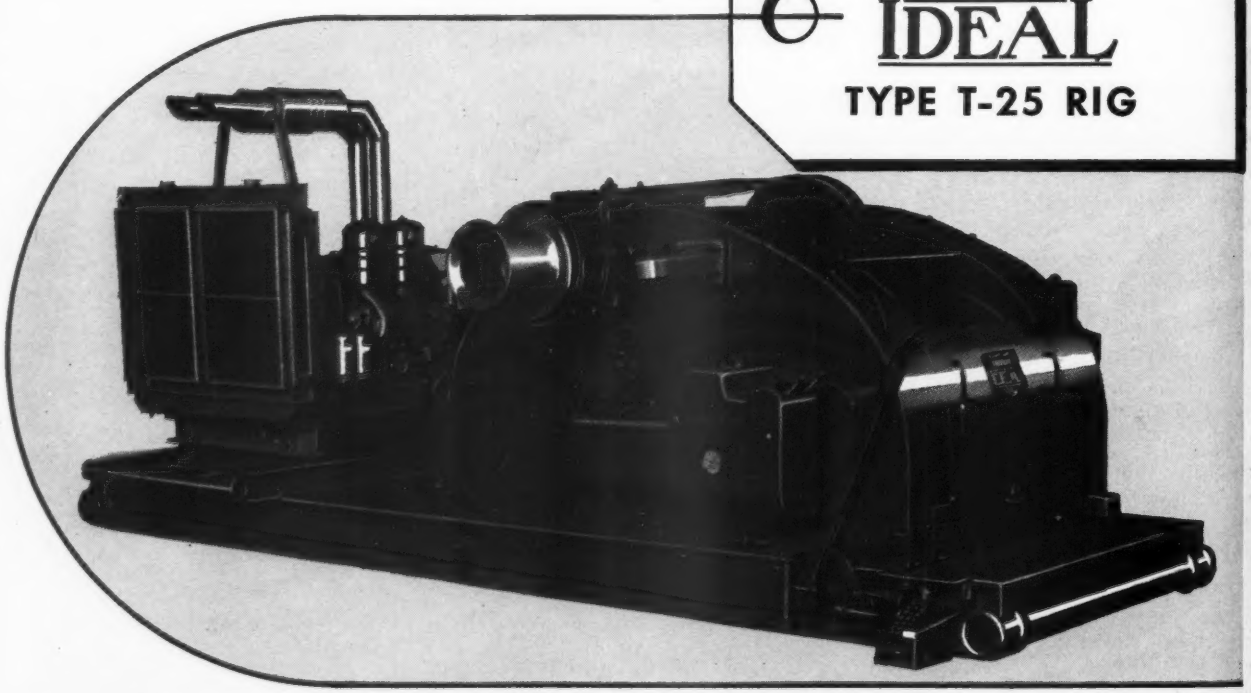
Torque-converter and transmission provide maximum hoisting flexibility at all speeds without stalling. The torque converter automatically takes enough of the engine torque to lift the load, automatically converts the remaining power into high-speed, time-saving hoisting.

Free-running spooling drum permits fast-fall of empty blocks . . . speeds operations to save time and money.

Trailer-mounting is readily accomplished . . . permits faster moving and fewer hours out-of-service between wells.

Write for Bulletin 348 . . . fully describes the strong, light National "Ideal" T-25 Rig.

NATIONAL
IDEAL
TYPE T-25 RIG



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THE INDUSTRY'S MOST COMPLETE LINE OF OIL FIELD EQUIPMENT

The sand was logged at 3937 feet and cored saturation for 37 feet.

Continental made the original discovery in the Sussex field last year with production from the deeper Lakota sand, and is now drilling a new stepout in the Meadow area one township south. American Liberty of Dallas, an associate of Delhi, had drilled three dry holes in the area south of the field.

Phillips Petroleum started drilling on a fourth well in the new South Cole Creek field northeast of Casper. The third well was completed recently for around 500 barrels oil per day.

In the northern part of the Basin, William Hamm, Jr., scion of the well-known brewing family, completed a farmout deal with Continental and Union Oil of California for an interest in 2350 acres in the Moorcroft area, Crook county. A test to Dakota-Lakota sand series around 5300 feet is planned in 3-50n-68w. At the present time Hamm is drilling a well in the West Stroner area, Campbell county (27-55n-69w) and at last reports found only mud with a rainbow of oil in the Muddy sand below 5368 feet.

The Spotted Horse Syndicate moved in a larger rig at its venture in the Spotted Horse Creek area in 21-55n-74w, Campbell county, with plans to deepen below the last reported bottom of 6500 feet. Objective is in Dakota-Lakota.

Brinkerhoff Drilling Co. of Casper plugged the Black Thunder wildcat at 7384 feet with no shows reported for Newcastle or Dakota sands. This was the latest well to test the trend southwest of the Mush Creek-Fiddler Creek area in the eastern Powder River Basin.

Tide Water Associated continued to meet with reverses in its search for an "oil patch in the Rockies." The firm's Lawn Creek venture in Natrona county was plugged at a depth of 5522 feet after testing shows in the Embar and Tensleep. The deep Poison Springs wildcat in 31-32n-83w, south of the West Poison Spider area where Pure found production in the Frontier below 14,000 feet, finally drilled thru nearly 5,000 feet of Cody shale—only to find the Frontier sand hard and interbedded with shale. At a depth of 13,100 feet, it seemed likely the venture would be abandoned.

At Badwater, following the West Poison Spider trend 35 miles to the northwest, Pure Oil Co. passed the 13,000 foot level with no report of formations encountered; although there were rumors that the wildcat would reach at least 14,000 feet.

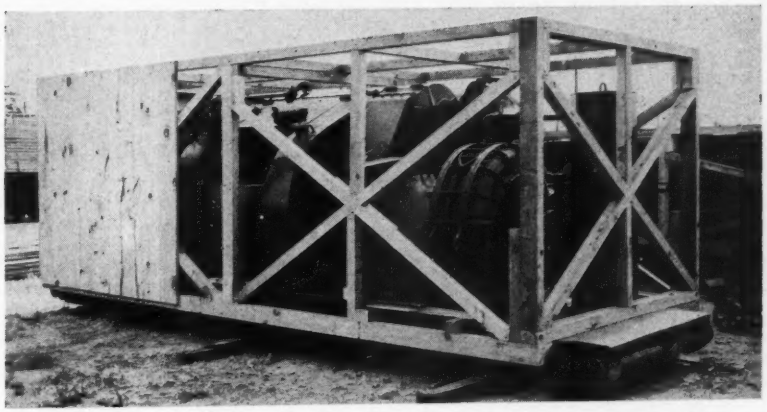
Stanolind Oil and Gas Co. temporarily abandoned its Canyon Creek venture in Sweetwater county near the Colorado line, at 13,321 feet after recovering 1,065,000 cubic feet gas per day from Dakota sand.

What may become one of the deepest tests in Wyoming is under way at Church Buttes, where Mountain Fuel was reported coring below 13,547 feet at No. 7 unit, a projected test to the Sundance and the first well in the gas field to go below the Dakota producing horizon.

No Crating Is Better Than the Framing

Specializing in Export Packing of

(No Job Too Small) ***Oil Field Equipment*** **(No Job Too Large)**



Above Shows Skeleton or Framing, All Bolted Construction, Before Waterproofing and Sheeting

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Montana

A bonus bid of slightly over $252,000 was offered by C. H. Murphy, Jr. of El Dorado, Ark., for a total of 21,257 acres of land covering the East Poplar area in Roosevelt county, Mont. Carter and Phillips

10 GOOD REASONS WHY OPERATORS PREFER

McCullough GUN PERFORATOR SERVICE

1. **MEETS EVERY CONDITION.** Guns fired either electrically or mechanically: guns run on cable, sand line, drill pipe, tubing, or on piano-wire measuring line in extremely high-pressure wells.
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6. **ALL SIZES OF BULLETS** from ⅛" dia. up to ¾" dia., to fit every possible need.
7. **BURRLESS BULLETS,** giving a completely burr-free hole, eliminating casing scraping, with *no* sacrifice of penetration.
8. **NO LOST TIME.** McCullough's simpler, lighter equipment cuts setting-up and moving-out time, speeds up every job.
9. **EXPERIENCED MEN.** With years of experience behind them, thoroughly-trained McCullough gun-perforating crews do their jobs quickly, efficiently, safely.

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EXPORT OFFICE: 30 Rockefeller Plaza, New York 20, N. Y.

also placed a joint bid on the lands at the Fort Peck Indian agency sale Dec. 10. The latter firms were successful bidders on a 16,000 acre Indian spread covering West Poplar, with a high of $2.16 per acre for a total bonus of $35,107.

Terms of the sale call for a test to Dakota-Lakota formations or a depth of 4,500 feet in Poplar Dome, a surface structure located between the Blood Creek syncline area and the Williston Basin.

Amerada has abandoned its second wildcat test in the southeast corner of the state. The Whitetail Creek venture in Carter county went to 4812 feet without finding any shows in Amsden, Dakota or Minnelusa.

General Petroleum has released rotary rig on its No. 1 Mary Waters, an unsuccessful Devonian test four miles west of Dutton in Teton county, but will install pumping equipment to make a small producer out of a 10-foot oil saturated zone at the top of the Madison lime in the well. The lime formation apparently was mudded off by the rotary, and the well was treated with acid and injections of diesel fuel to cut through this emulsion.

The search for Devonian production continues in the Sweetgrass Arch area north of Great Falls. Hunley, Nairns and Cole-Onstad's No. 1 wildcat in the Genou area on the east flank of the arch logged more oil shows in the Devonian down to total depth of 3787. But it took a microscope to find evidence of the oil in cuttings, and the operators were debating whether to run a string of 5½ inch pipe for testing. The hole filled with water nearly to the top. Meanwhile the same operators are drilling another wildcat to granite at the No. 1 Rossmiller about 12 miles to the northwest.

In central Montana, Texas Pacific Coal & Oil was drilling past 2500 feet in its deep wildcat southeast of Roundup and far out in the Bull Mountain syncline. The firm has 40,000 acres of leases surrounding the well in an area in which there has been little drilling.

The Texas Co. completed its discovery well at Sumatra in Rosebud county for 55 barrels of oil per day on the pump, with only a trace of water. The well in section 5-9n-34e is located east of previous Amsden production in the central Montana area. It was drilled to 6006 feet, then plugged back to 4415 for completion in the Amsden. During the past year Amsden production was established at the Big Wall and Melstone fields northwest of Sumatra in Musselshell county, and led to extensive leasing throughout central Montana.

Phillips will drill a wildcat in the Rattlesnake Coulee area north of the Kevin-Sunburst field in Toole county. The well is located "right on the nose" of a structural feature north of the field. Phillips was also testing its No. 1 Northern Farms in the Flat Coulee field near the international boundary in Liberty county. Oil saturation was reported between 2980-3000 in the Swift sand.

Rugged and Handy For Small Rigs!

The Clipper "Sealtite" above is permanently installed on a Hopper Blitz trailer-mounted rig. Lowering the mast and moving in no way interferes with this installation.

- RUGGED AND DEPENDABLE
- KEEPS GAUGES OFF DEAD LINE
- PERMANENT INSTALLATION
- EASY VISIBILITY
- ELIMINATES DEAD LINE WHIP
- LASTS LONGER

MARTIN-DECKER Production Model Clipper "Sealtite" Weight Indicators

A Martin-Decker Production Model Weight Indicator Gauge can be placed anywhere you want it—at the brake, in front of the driller, over next to the line permanently attached to the mast where it can be seen by the driller—without danger of damage from dead line vibration or whip, and with it you can read your loads with precision in pounds. Equipped with supersensitive Vernier for maximum sensitivity and readability. Vacuum loaded at the factory and permanently sealed. Easy to install and move. No adjusting, no pumping.

Install your Clipper Production Model permanently on your mast and forget it. It's there when you set up, when you tear down, and when you move.

MARTIN HOME OF THE WEIGHT INDICATOR DECKER CORP.

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Gas Line Approved

The Montana-Wyoming Gas Pipe Line Co. received permission from FPC to lay a 340-mile gas line from the Worland field in Washakie county, Wyo., to its station at Cabin Creek, north of Cedar Creek, in Fallon county, Mont. At a previous hearing, the application for the line had been denied.

Construction is scheduled to be completed in 1951. The line will make available an additional 25,000,000 cubic feet of gas daily to the Montana-Dakota Utilities Co. for markets in Montana and the Dakotas.

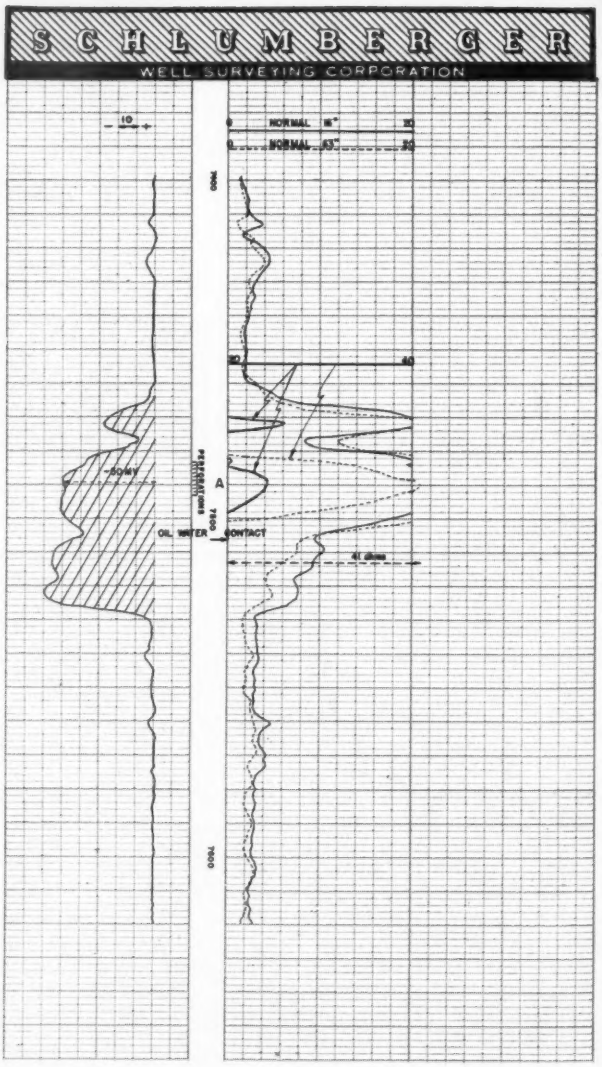
The 12¾ inch line will provide an outlet for natural gas produced with oil at the Worland field. The gas, heavily charged with hydrogen sulphide, will be treated in a new plant built in the field by Texas Gulf Sulphur. This plant is scheduled for completion early in January, and will produce an estimated 300 tons of sulphur daily. After the sulphur is extracted, the gas will be processed for liquid hydrocarbons in a plant being built by Pure Oil Co., operator of the Worland unit. This plant is also nearing completion. The dry gas will then

WILCOX SAND
BEE COUNTY, TEXAS

Mud (Water & Clay): $R_m = 0.85$ ohm at BHT
Bit Size: $8\frac{5}{8}$"
Spacings: AM = 16"
AM' = 63"

2

This is the second in a series of interpreted electrical logs from identified formations and fields which Schlumberger will reproduce in this publication. If you would like to keep this entire series, please write to us on your letterhead and we will be glad to send you a reprint of this log (and the preceding log in this series) with a binder in which you may file subsequent logs as they are published. This series is made possible through the courtesy and cooperation of the oil operators who have released these logs.



LOG ANALYSIS

1) Water saturation S

Resistivity at water level $R_o = 2.5$ ohms in neighboring well.

At level A: $S = \sqrt{\frac{2.5}{41}} = 24.5\%$ approx.

2) Formation water resistivity R_w

With $SP = -70 \log_{10} \frac{R_m}{R_w} = -50$ mv.,

$R_w = 0.16$ at BHT

$F = \frac{R_o}{R_w} = \frac{2.5}{0.16} = 15.5$ approx.

3) Porosity p

$p = \sqrt[m]{\frac{1}{F}} = 25\%$ for $m = 2$

CORE ANALYSIS

Average Porosity	24%
Average Permeability	500 md.
Residual Fluids	Oil 11%
	Water 47%

PRODUCTION RESULTS

Perforated: 7483-7493 with 48 shots

Production Potential: 165 bbl. oil 42° API

SCHLUMBERGER
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HOUSTON, TEXAS

be transported by pipeline to Montana. Inert gas will be injected into the producing formation, the Embar lime around 10,000 feet, for pressure maintenance.

Personal Mention

Don Murphree, geologist for British-American at Casper, has been transferred to Houston.

Frank Morgan resigned Dec. 15 as geologist with Stanolind Oil and Gas Co., in Casper.

Wes Felt was promoted recently to landman with Ohio Oil Co. under Dave Sellery, division land man. Don Redfern was made division scout for the firm, and is spending a good deal of his time in western Nebraska these days.

Bruce Choate has been made Rocky mountain district geologist with Atlantic Refining Co., at Casper. George Norton, acting district geologist, has returned to Dallas.

The annual fall dance of the Wyoming Geological association was held Dec. 9 at the Gladstone hotel in Casper.

G. F. McMiller, district marketing manager for Gulf Oil Corp. at Denver, has been elected chairman of the Rocky Mountain Oil Industry Information Committee (OICC), succeeding Paul Hirth of Continental. Melvin J. Rupp, district representative of the committee with offices in Denver will become a field staff member in the department of information, API.

Utah

There were no outstanding developments in the Utah oil picture during the early part of December.

California Co. was drilling below 2700 feet at its deep test southeast of the Carter-Stanolind Roosevelt discovery in Uintah county. The well is planned as a deep test around 11,000 feet.

Robert Six, air lines executive, was drilling around 1,000 feet at the No. 1 Hullinger extension well in Ashley Valley field. He recently failed at the No. 1 Massey on the west side of the field.

Northeast of Ashley Valley, Sun shut down at 4075 feet for repairs at the Brush Creek wildcat, with the drill bit possibly in Phosphoria. Objective is Weber, productive in Ashley Valley.

Al Hill and associates were delayed by cave-ins in the Pennsylvanian at Lime Ridge in section 32-40s-20e, San Juan county. Non-inflammable gas shows were reported in this formation below 2000 feet.

Carter was still having crooked hole trouble at the Strawberry Unit wildcat in Wasatch county. Drilled to 2755 feet, the well was plugged back to straighten the hole, then seven degrees off vertical. The ninth whipstock was set in an effort to straighten the bore.

Colorado

Amerada Petroleum is preparing to test gas shows in the Dakota sand at its Asbury Creek wildcat in Mesa county, southeast of the Garmesa-Carbonera domes. The well in section 14-9s-101w was plugged back from total depth of 4223 feet after drilling into granite wash. Top of Dakota was called at 2717 feet. Gas sands in the Dakota previously yielded natural gas on drill stem tests.

In the Dove Creek area of Montezuma county, H.E.R. Drilling Co. drilled plug at its well in 1-38n-19w prior to acidizing for tests of the upper Paradox zone productive in the discovery well. The well was drilled to 6158 after calling the Paradox at 5797, and shows of gas were reported in cores.

McDannald Oil Co. is plugging back to test shows in the Dakota at its Hartzel anticline in 20-12s-74w, Park county. The well went to 6282 feet after cutting through a fault around 4910 feet.

Lowell and Voltz have abandoned their venture with Continental on Gossard Dome in Moffat county at a total depth of 4559 feet. The well tested water in the Nugget below 4500 feet, after logging some slight saturation in this zone.

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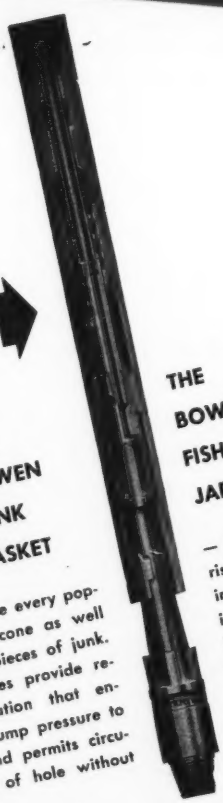

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Field Development

Los Angeles Basin

Irvine Ranch Leases Taken

Shell Oil Company leased 54,000 acres of the famed Irvine ranch in Orange County. The property is between Laguna Beach and Newport Beach. Core drilling on the ground is now in progress. An exploratory hole probably will follow the present operations and in this event would be the most southerly well undertaken in the area by a large operator. Territory east of Newport has been the scene in past years of much wildcatting. Amerada Petroleum, Standard of California and Superior Oil are among those companies which drilled and got only dusters for their pains. There were many tar zones near Newport Beach some 20 years ago.

Newhall Try Spuds

Spudded and making fast time through surface formations is the Superior Oil Company L. A. Holmes No. 1 on Sec. 36-4n-16w in the Newhall area. It is about a mile south of General Petroleum's Circle J No. 2 on Sec. 26-4n-16w and a mile and one-quarter west of Placerita production. The General Petroleum well is making hole below 2800 ft. In the Placerita area, Morris Estate Company of San Francisco has just wound up its leasing campaign there, Milton L. Kane, manager reported. Leases take in some 3100 acres in Township 4n and Range 14w. They are in Secs. 1 to 7 and 8 to 11, inclusive, and 18 and 19 and the northwest quarter of Sec. 20. Kane made known geological work was in charge of Byron Norris, who recommended the drilling of a well in Sec. 4. The well probably will go to between 3500 and 4000 ft. for a look at zones below the Mint Canyon formation. Nelson-Phillips Oil Company, which recently paid a $5 dividend on shares of the firm, is completing its 12th well at Placerita. Since the company opened up the field on May 1, 1948, some 200 wells have been finished there by various organizations. N. Gordon Phillips is president, and Chester A. Nelson, vice president and general manager. The company reported that its production costs are averaging the very low figure of only 20 cents a barrel. Nelson-Phillips wells are putting out largely 14 and 15 gravity crude oil, which brings currently $1.09 per barrel.

San Fernando Leasing Area

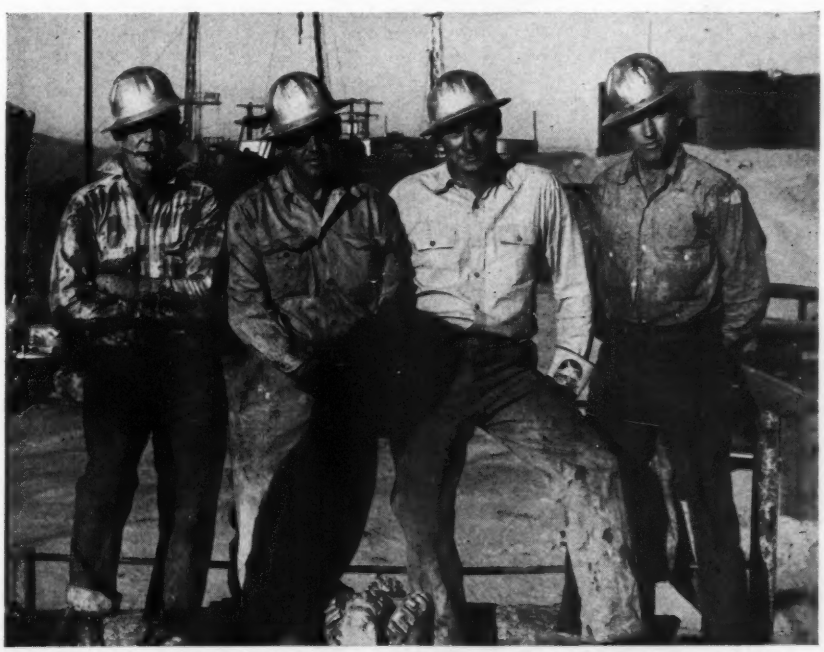
Considerable leasing activity is evident in the San Fernando area, where California of Standard is drilling its Woo No. 1 at 7600 ft. The well is on Sec. 19-2n-15w. Humble Oil & Refining Company has blocked up a substantial number of leases in the Buena Park area.

Del Valle Try Starts

Bolsa Chica Oil Corporation and Fred Manning have spudded in their important test well, Strawn No. 1, northeast of the Del Valle field on Sec. 10-4n-17w.

Newhall Well Scene

Three exploratory ventures are scheduled for initiation in January by other operating organizations on



At Atlantic Oil Co.'s well Myers No. 1, in the Placerita Canyon field. Left to right: Al Blood, cathead; Barney Horan, driller; Bill Hunter, derrickman; Elmer Morehead, pipe racker.

leases held by Independent Exploration Company. Two will be drilled in the Newhall area and one in the Gould Hills area near South Belridge on the west side of San Joaquin Valley. This was disclosed in the company's third quarter report to shareholders.

Fullerton Test Listed

Rothschild Oil Company, is the sponsor of an interesting exploratory well in the Fullerton area. Known as Chapman No. 1, the new job will drill about 1000 ft. south and slightly east and is regarded as up structure from a well drilled by Standard in 1913. This earlier project was credited with finding some 50 ft. of good looking oil sand, but for some reason not clear at this time, the well was never brought to the completion stage. Rothschild's play involves more than 1000 acres.

Moorpark Lease Site

D. R. Langstaff of Los Angeles is the apparent lessee of considerable ground from Ventura Farms, Inc., on Secs. 16, 17 and 18 and parts of 19, 20 and 21 in 2n-19w, Ventura County. The ground is foreseen as the locale for wildcatting operations early in 1950.

Saugus Test Digs

Northwest of the Placerita field and west of the state highway, Robert S. Lytle is drilling at 1840 ft. with Newhall Land & Farming No. 1 exploratory well on Sec. 22-4n-16w in the Saugus area. Drill site is three miles southeast from Humble Oil's discovery well on Sec. 23-4n-17w. Lytle is bent on turning up an accumulation of oil from a Miocene pinchout along the hills in the vicinity.

Oak Canyon Test Deeper

In the Oak Canyon area, Douglas Oil Company of California is digging at 4500 ft. with its Oak Canyon No. 1 test in Sec. 4-4n-17w. The well was spudded on November 12.

Whittier Try Works

After going originally to 320 ft., E. D. Taylor Company is redrilling at 250 ft. with its No. 1 test on Sec. 11-2s-11w in the Whittier area.

Corona Try Digs

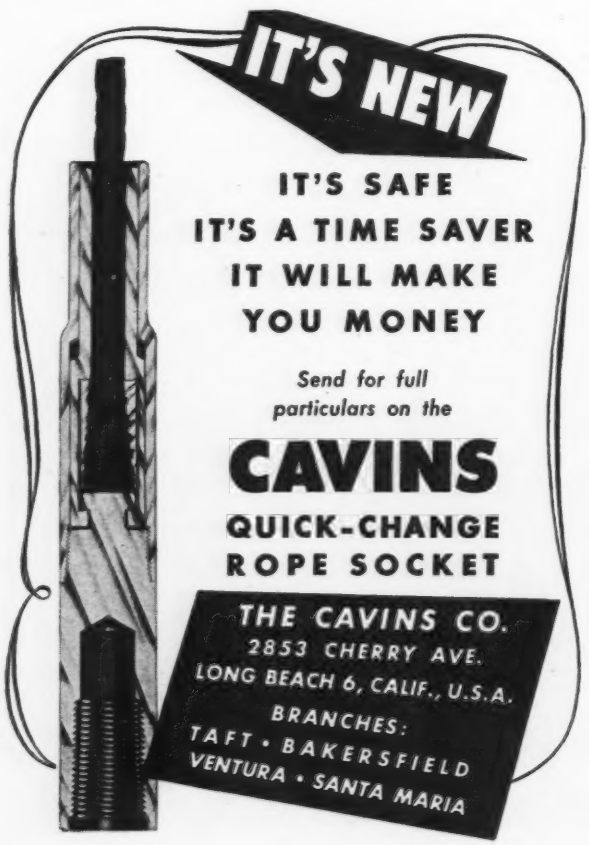
Drilling at 2700 ft. constitutes the status at this writing of the Airways Petroleum Corporation Santa Anaheim No. 1 wildcat in the Corona area, Sec. 9-3s-7w, Riverside County.

Victorville Wildcat Works

Near Victorville in San Bernardino County, H.T.&G.G. Widney are drilling with cable tools at 950 feet in their No. 1 test. Location is in Sec. 33-6n-4w, San Bernardino County.

Lost Hills Well Tests

Tests are continuing in Standard of California's Van Sicklin No. 45 wildcat in Sec. 36-27s-21e at Lost Hills. Total depth is 14,577 ft., with bridge plug at 12,832 ft.



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San Joaquin Valley

Standard Leases Tejon Ranch Land

Reserve Oil and Gas Company has completed an agreement with Standard of California covering approximately 6100 acres of land under lease to Reserve in the Tejon Ranch area of Kern County. The lease block is adjacent to the Reserve Slosson parcel on which 28 gravity crude oil in commercial amounts was discovered recently at a depth less than 500 ft. Standard has been granted exclusive rights to conduct geophysical and geological surveys on the property for 90 days. At the end of that period Standard must either quitclaim or commence drilling operations. If Standard decides to drill and successfully develops, provision is made for it to enter into one or more operating agreements with Reserve. Each agreement will cover not more than 1920 acres, with Standard acting as operator and carrying Reserve for a 50 per cent interest in the parcel. In the Tejon-Reserve area, Drilling & Production Company has completed O.M.B. No. 47-33 at 4504 ft. for a yield as yet not representative. Rose L. Bright's Bright No. 2 on Sec. 34-11n-19w is in the completion stage. In the Tejon Hills, O. M. Slosson's No. 5 is a new producer at 451 ft. Gas sand was topped at 368 ft. and oil sand at 411 ft. in the well on Sec. 22-11n-18w. Output has not been gauged yet.

Paloma Well Brought In

In the northwest Paloma area, Ohio Oil Company has finaled its KCL-B No. 43-20 on Sec. 30-31s-26e for a yield last reported of 406 barrels of 57.3 gravity oil through a 3/16-in. bean. This included 116 barrels of wash oil. Gas output was satisfactory.

Pyramid Hills Project Drills

On a 1160-acre lease block in the Pyramid Hills of Kings County, Pacific Oil and Gas Development Corporation of San Francisco is drilling its Hand No. 35-28 on Sec. 28-24s-18e. The venture is making hole below 800 feet and is designed to go to the Avenal sand, where an accumulation of light gravity oil is expected. Location is a mile and one-half southeast of wells producing in the Pyramid Hills field developed by the company six years ago. A number of zones above the main objective will be explored in a journey probably to around 3000 ft.

Tranquility Test Gives Up

Near Cantua Creek in the Tranquility area, Havenstrite Oil Company has abandoned its Rawn No. 1 wildcat in Sec. 13-16s-15e, Fresno County. The project found showings in drilling to 7617 feet, but on test they failed to react with commercial vigor. The well was 175 ft. from a prior test drilled by Texas Company. About 10 miles west and a little north of the Havenstrite project, Severns Drilling Company is the holder of a spread of 18,000 acres.

Kern Royalties Still Gaining

Oil and gas royalties of Kern County Land Company continued in October to widen the gain over last year. These revenues reached $1,342,764 in October, the company reported in San Francisco. This compared with $1,079,998 in October, 1948. This brought the total for the first 10 months of 1949 to $14,547,093, against $12,458,296 in the corresponding period of 1948.

Belgian Try Digs

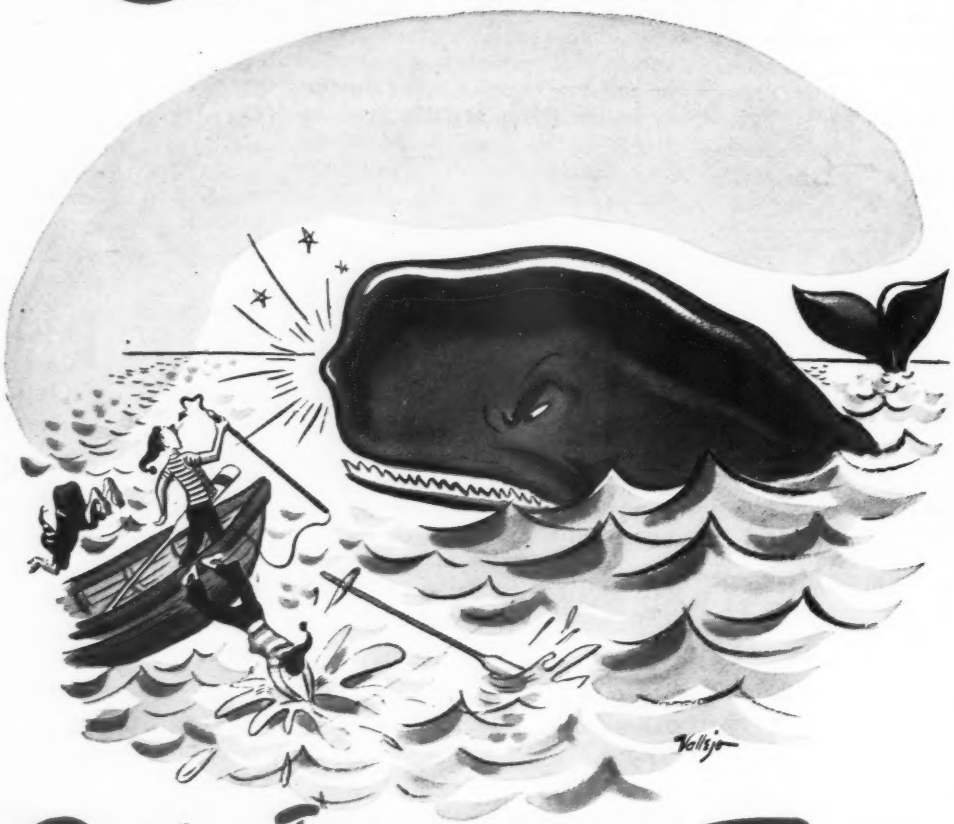
Tide Water Associated is drilling ahead below 1100 ft. with its Veon No. 82-25 test well on Sec. 25-30s-21e in the Belgian Anticline area of Kern County. The company has location for Stone No. 47-30 on Sec. 30-30s-22e.

Pleito Hills Wildcat Quits

The Pleito Hills area of Kern County is the scene of an oil failure. It was Richfield Oil's Pleito Hills No. 1, which was abandoned at redrilled depth of 7025 ft. The project

Pike Drilling Co., contractors for Independent Exploration Co.'s N.R.C. No. 10 in the Placerita Canyon field, left to right: Jack Green, derrick; D. O. Brown, driller; Charles F. Voshal, cathead; G. F. Shivers, lead tong.

Steel Problems?



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was a joint test between Richfield and Independent Exploration. The Pleito Hills are on the slope of the San Joaquin Valley on the left side of the road running from the Ridge route into the valley.

Caliente Creek Wildcat Coring

At Caliente Creek in Kern County, Western Gulf was last reported coring at 1560 ft. with its Di Giorgio No. 44-26 wildcat on Sec. 36-30s-29e. The derrick stands about a mile southeast of the Bowles property at South Edison.

Coalinga Try Quits

Bottomed in gray sand and claystone at a depth of 1920 ft., Max A. Newton has pulled out of his No. 77-12 well on Sec. 12-21s-14e in the Southwest Coalinga area, Fresno County.

San Benito Test Capped

Regent Oil Company's Baumgartner No. 2 wildcat well on Sec. 26-17s-9e in the San Benito area of San Benito County is standing capped, with the hole bottomed at 5159 ft. Two other test wells are understood in prospect for the area and the Baumgartner No. 2 may await results of these projects before resuming work. Regent's well is reported in the Pliocene at present. In the Ciervo area, Fairview Exploration Company has started its Fairview-Panoche No. 1 wildcat on Sec. 33-15s-11e.

Wheeler Ridge Well Producing

Richfield Oil has completed its Gordon No. 142-28 well on Sec. 28-11n-20w in the Wheeler Ridge field for 120 barrels of 22 gravity oil on the pump from 1670 ft.

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Round Mountain Wildcat Drills

On a 240-acre lease in the Round Mountain area, George Terry is drilling at 760 ft. his Caussa Estate No. 1 wildcat well on Sec. 9-28s-29e. Location is 330 ft. south and west from the northeast corner of the southwest quarter of the section.

Cuyama Valley Wells Drilling

R. B. Jackson's Stablefield No. 1 test on Sec. 20-10n-24w in Cuyama Valley is drilling ahead below 1100 ft. Richfield Oil's Round Springs Unit No. 1 on Sec. 32-8n-23w is making hole at 1675 ft. Homan C No. 1 on Sec. 29-10n-27w has reached 4200 ft. Florence A No. 2 on Sec. 21-11n-27w at last reports was down 1876 ft. Superior Oil is rigging its U.S. Government No. 18-2 wildcat on Sec. 2-11n-28w. It is an offset to Bandini Petroleum's 430-acre parcel.

Raisin City Project Works

Two locations east of the Northwest Syndicate and British American Oil's K.R.D. No. 33-10 well at Raisin City in Fresno County, L. M. Lockhart is drilling his N.C.C. No. 1-A-10 on Sec. 10-15s-17e at 1234 ft. No. 1-11 on Sec. 11-15s-17e is pumping from 6350 ft.

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Rio Vista Test Starts

Porter Sesnon, William T. Sesnon, Jr., and Barbara Sesnon Cartan have staked location for an interesting gas test well about four and one-half miles southwest of the most southerly production in the Rio Vista gas field. Drill site is six miles east of the town of Antioch. The well will be known as Sesnon No. 1 and drilled in Sec. 24-2n-2e.

Bryson Try Digs

At Bryson in Contra Costa County, Standard of California's Sproule No. 1 exploratory well is making hole ahead below 4000 ft. on Sec. 14-1s-3e.

La Honda Try Idle

Preparing to deepen from 1260 ft. is the report from the Pomona Tile Manufacturing Company Pomona No. 1 wildcat on Sec. 16-7s-4w in the La Honda area of San Mateo County.

Boulder Creek Wildcat Deeper

Undertaken jointly by Honolulu Oil, Seaboard Oil and the Doheny interests, Hinman No. 1 wildcat at Boulder Creek is drilling on down at 2675 ft. Location is in Sec. 17-9s-2w, Santa Cruz County. Merle W. Wheeler's Wheeler No. 1 explorer on Sec. 6-9s-2w at West Moody Gulch is down 360 ft. by the persuasion of cable tools.

Santa Barbara Wildcat Drills

On the Lazy R G Ranch in the San Marcos area of Santa Barbara County, Lewis W. Welch is drilling at 4130 ft. with his No. 2 wildcat on Sec. 19-6n-28w. The operator's Welch-Janeway No. 1 on Sec. 11-6n-29w is idle at 6240 ft. On Santa Rosa Island off the Santa Barbara coast, J. R. Pemberton is fishing drill pipe stuck in his Tecolote No. 3. The hole is down 932 ft.

Arroyo Grande Test Completed

In the Arroyo Grande area of San Luis Obispo County, C. W. Colgrove has finished McDonald No. 2-5 test on Sec. 5-32s-13e for 90 barrels of 16 gravity oil daily. Elberta No. 1-5 test on the section is coring at 5000 ft.

Ramona Well In

Southern California Petroleum Corporation's Adams-Aguirre No. 110 is a new producer in the Ramona field. It is putting out 145 barrels a day from the Del Valle zone in the Upper Miocene series. Location is in Sec. 13-4n-18w, Ventura County. Texas Company's Kern No. 34 on Sec. 18-4n-17w also has been finaled. It is pumping 127 barrels of oil daily.

Sonoma County Wildcat Starts

An interesting well just spudded is the Wa-Me-Co Drilling Company's Sartori No. 1 on Sec. 24-5n-7w, a little less than two miles northwest of the gas producing sector at Petaluma in Sonoma County. Petaluma has won considerable fame as the largest poultry center in the world.

Ozema Test Sets Casing

C. W. Colgrove cemented 7-in. casing at 4025 ft. in his Wright No. 54-18 on Sec. 18-7n-23w, with total depth of the hole 4570 ft.

Lion Mountain Project Finals

Humble Oil and Refining Company's Theo. E. Hammond No. 2 on Sec. 18-4n-22w has been completed in the Eocene formation at 4228 ft. The well is in the Lion Mountain area of Ventura County, with a representative production gauge yet to come. Berylwood Inv. No. B-1 on the section is redrilling at 3000 ft., after plugging back to around 2100 ft. from 5994 ft.

Shandon Test Digs

At Shandon in San Luis Obispo County, General Petroleum Corpo-

At Union Pacific R. R. Co.'s well No. E-32 at Long Beach, E. B. Hall Co. contractors, rear row left to right: Carl Wendland, derrick; Ed Edwards, cathead; George Proud, driller; Art Revell, pipe racker; front row, left to right: J. W. Sherohman, lead tong; C. C. Horace, petroleum engineer in training.

ration is drilling ahead through the shallower formations with its Clark No. 84-25 on Sec. 25-26s-14e. At San Miguel, C.C.M.O. Company's Mahoney No. 1 wildcat is down 4800 ft. and drilling on.

Simi Well Will Deepen

Frontier Oil Company is making ready to deepen from 2540 ft. the Strathearn-Coleman No. 1 test well on Sec. 12-2n-19w in the Simi area, Ventura County. Formerly operated by the Engineers Syndicate, Ltd., the project was abandoned in October, 1948. On Sec. 31-3n-17w, Northridge Oil Company has spudded Simi No. 1.

Calabasas Wildcat Digs

At Calabasas, one of the earliest settlements in Los Angeles County, Chadwick G. and Patricia P. Trower are drilling at 544 ft. with No. 1 test on Sec. 32-1n-17w.

Montalvo Job Drills

Near the Santa Clara River in the Montalvo area, Standard of California's McGrath No. 26-10 on Sec. 30-2n-22w is making hole at 8200 ft.

Casmalia Well Starts

Union Oil Company has foundations in for Escolle No. A-6 on Sec. 28-9n-24w in the Casmalia field and Purisima No. 64 on Sec. 36-8n-34w in the Lompoc field.

Rincon Field Adds Producer

Fullerton Oil's Hobson State No. 145-6 on Sec. 8-3n-24w in the Rincon field has been completed at a plugged depth of 3189 ft. for 100 barrels a day. C.C.M.O. Company's Hobson No. A-20 on Sec. 14-3n-24w is drilling at 5780 ft. Hobson No. B-150 on Sec. 16-3n-24w is making hole at 10,000 ft.

Elwood Adds Job

Signal Oil & Gas Company is beginning work on another drilling job at Elwood. It is State No. 208-20 on Sec. 18-4n-29w. State No. 208-4 has been completed on the pump at 6108 ft. for an unestimated output.

Ventura Avenue Well Drills On

Drilling is going forward steadily at 8600 ft. in the Wright & Lohman Barnes-Sparks No. 2 on Sec. 21-3n-23w in the Ventura Avenue field.

Dominion Try Drills

Drilling is below 1000 ft. in the J. H. Maurer and Arthur C. Fisher Jean No. 6 wildcat in the Dominion area, Sec. 16-26s-28e, Kern County.

Mojave Try Digs

Cable tool drilling at 750 ft. is the latest report on the Paul Beamer Oswald No. 2 on Sec. 12-11n-12w in the Mojave area of Kern County.

Sievert Try Works

Bena Oil Company's Ben No. 1 wildcat well on Sec. 27-30s-30e continues to explore ahead at 2100 ft.

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You always save time with ARMCO Casing because the slip-joint collars and accurately machined pipe ends assure fast line-ups without clamps. Slips and elevators fit the pipe. No special equipment is needed.

You'll find many other money-saving advantages in ARMCO Casing. Write for complete information.

ARMCO DRAINAGE & METAL PRODUCTS, INC.
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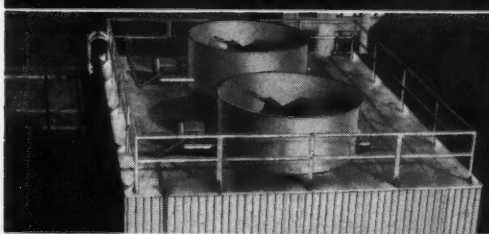
ARMCO SLIP-JOINT CASING

Pritchard COOLING TOWERS



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. . . Adequately Sized

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Cooling Towers
Heat Exchangers
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FIVE MAJOR FIELDS
Chemical, Natural Gas, Petroleum, Power and Refrigeration.

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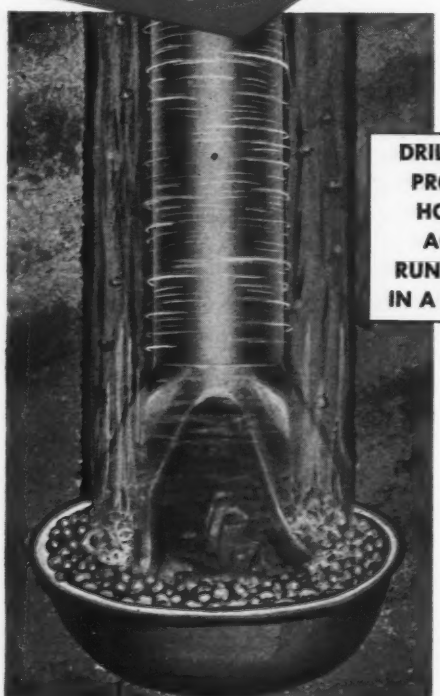
THE NEW REED "LB"

gives faster penetration because

YOU DON'T WANT *this*

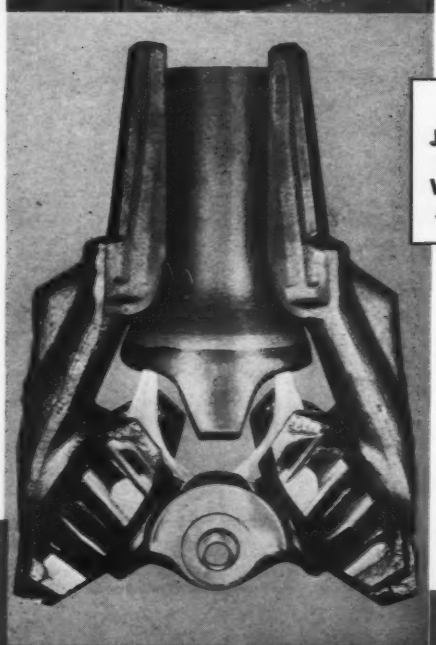
But...

YOU DO WANT *this*

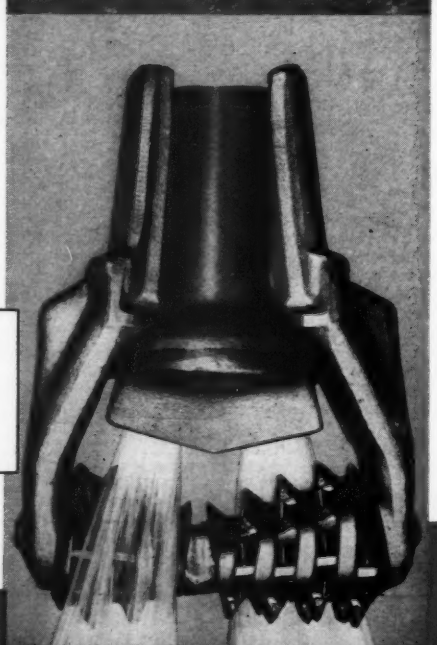


DRILLING WITHOUT PROPER BOTTOM HOLE CLEANING ACTION IS LIKE RUNNING YOUR BIT IN A PAN OF GRAVEL

THE NEW REED LIQUID-BLAST ROCK BIT IS CONTINUALLY CUTTING ON NEW FORMATION



VIEW SHOWING JETTING ACTION OF SIDE CUTTER JETS, WITH CROSS ROLLER JETS PLUGGED OFF



VIEW SHOWING JETTING ACTION OF CROSS ROLLER JETS, WITH SIDE CUTTER JETS PLUGGED OFF

Liquid-blast ROCK BIT

it cleans the bottom of the hole

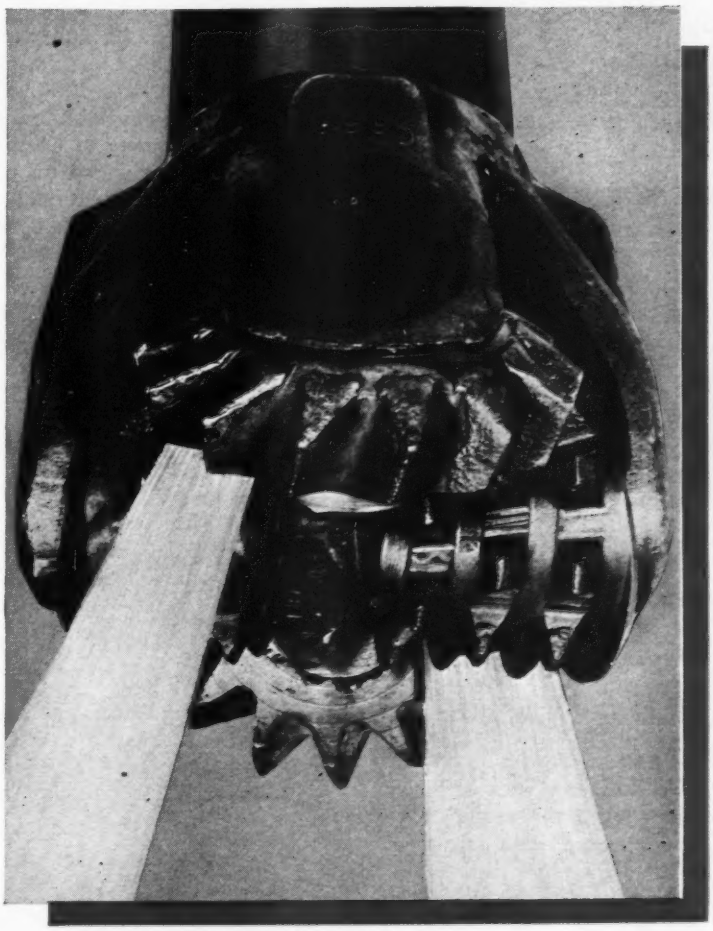
For better cutter tooth cleaning action and more effective utilization of the drilling fluid energy... for faster penetration and more hole per bit

The new Reed Liquid-Blast ("LB") Rock Bits were designed to more effectively utilize the output of the surface pumping equipment.

The bit body has been designed to permit the use of a slush nozzle giving a more effective distribution of the drilling fluid and with nozzle openings designed to direct powerful jets between the cutter teeth and onto the bottom of the hole.

This powerful jetting action, however, is not entirely dissipated on the cutter teeth but continues on to the bottom to remove the bit cuttings rapidly from the bottom of the hole.

Reed "LB" Rock Bits, therefore, are continually cutting on new formation, and the possibility of re-cutting formations already loosened is practically eliminated.



Don't let your rock bit rotate in a "pan of gravel" but specify the bit that cleans the bottom of the hole—the new Reed "LB" Rock Bit.

Reed ROLLER BIT COMPANY

HOUSTON 1, TEXAS

THE MARK OF QUALITY

NEW YORK • BUENOS AIRES • LONDON

Personalities IN THE NEWS

Noltein And Hanners Advance At Superior Engine

Appointment of George F. Noltein as Director of Research of its Superior Engine Division, Springfield, Ohio, was announced recently by The National Supply Company. At the same time announcement of the appointment of Harvey W. Hanners to succeed Mr. Noltein as Chief Engineer was made.

Noltein — Hanners

Mr. Noltein, who has a long and successful record as an engineer and designer in the Diesel engine field both in Europe and the United States, joined National Supply's Superior Engine Division in 1927. He has been Chief Engineer there since 1937.

Mr. Hanners, who has been associated with the Superior Engine Division since 1941, has been assistant to the chief engineer for the past two years.

Mr. Noltein received his engineering education in Germany and in Russia, being graduated from the Institute of Technology, Danzig, and the Moscow Institute of Technology.

Mr. Hanners was graduated from the University of Wisconsin with a B.S. degree in Engineering in 1931 and has specialized in the manufacture and development of both diesel and gas engines.

Clark Bros. announce with deep regret the death of their Assistant Chief Engineer, Mr. Robert C. Engelman on November 30, 1949.

Mr. Engelman became associated with Clark in 1937 as engineer on a special project. Prior to that date, he had been associated with the T. R. Dresser Manufacturing Co. of Bradford, Pa., the Dryins System, Inc. of Chicago and the Western Electric Company of Chicago.

Mr. Engelman had on many occasions achieved national recognition as an engineer in both engine design and welding.

Harold R. Pauley, prominent Los Angeles oilman, has been elected a member of the executive committee of the Asphalt Institute.

Edward G. Seubert, former president and chairman of the executive committee of Standard of Indiana, left an estimated estate of $1,030,000, according to his will filed in probate court in Chicago. The will directed that the income from the estate go to his sister, Mrs. Josephine Scott.

John L. Sullivan, public relations department, Standard of California at San Francisco, has returned to headquarters in the Bay city from a short business stay in Los Angeles.

John Gaston, 51-year-old oilman, who recently brought in a well producing 3000 barrels daily in Texas, died suddenly in the Roosevelt Hotel, Hollywood. Some time ago he inherited $4,000,000 from his father.

Sonia Bonawitz, secretary to Bob Roberts of Standard of California in Los Angeles, has returned from a vacation at Palm Springs. The parents of Miss Bonawitz, Mr. and Mrs. Karl A. Bonawitz of Los Angeles, recently announced her engagement to William Dargin Smith.

Barry Joins Wickwire Spencer

George J. Barry has been recently appointed wire rope sales engineer for The California Wire Cloth Corporation, subsidiary to Colorado Fuel and Iron Corporation, manufacturers of Wickwire Spencer Wire Rope. Mr. Barry was formerly affiliated with the Bethlehem Pacific Coast Steel Company.

George J. Barry

Barry's wire rope activities go back over a period of many years leading back to 1931. He started with Pacific Wire Rope Company and has been actively engaged in the wire rope business since that time excluding four years in the service.

The Howard Supply Company is the distributor for Wickwire Spencer wire rope and most of Barry's activities will be in promoting sales thru the Howard people who have stores conveniently located in the various California oil fields, maintaining adequate stocks of wire rope in the trade.

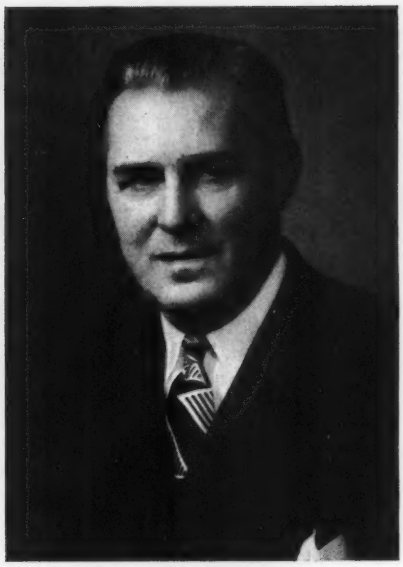
Venema and Bockman Advance at Universal

David W. Harris, president of Universal Oil Products Company, Chicago, has just announced that M. P. Venema, formerly head of the company's patent department, was elected a vice president of Universal at a recent meeting of the Board of Directors.

A graduate of Armour Institute of Technology (now Illinois Institute of Technology) and Georgetown University in law, Mr. Venema has been associated with Universal since 1935. From 1941 to 1944 he represented Universal's patent department in Washington, and in June of the latter year returned to Chicago to direct the activities of that department, a position he held until elected vice president.

In addition to electing Mr. Venema a vice president, the Directors also elected George A. Bockman treasurer. Mr. Bockman was formerly assistant treasurer and has been with Universal since 1922. At one time he served as purchasing agent of the company, and was made assistant treasurer in 1941.

M. P. Venema



George A. Bockman

George W. Walton Elected Exec. V.P. of International Derrick and Equipment Company

The election of George W. (Jack) Walton as Executive Vice President, and as a member of the Board of Directors of the International Derrick and Equipment Company, has been announced by J. M. Gardner, president.

George W. Walton

Mr. Walton formerly held the position of Vice President in charge of the IDECO Machinery And Export Sales Division. In this capacity he has gained both a national and international reputation for his knowledge of oilfield equipment. Mr. Walton's entire business career has been devoted to equipment sales. He joined IDECO in 1944. Prior to this he had first entered the oil business as a representative of the National Supply Company, serving three years in this country and two in London, England; later associations were with the Wilson-Snyder Mfg. Company where he developed the mud pump program; with EMSCO as Vice President and Sales Manager; and with Unit Rig and Equipment Company as Sales Manager. He is a native of Belton, Texas and attended the Missouri School of Mines until he joined the Air Service in World War I.

Bill McLaine, Len Little, Frank Hill, Dick Guiberson, past presidents of the Petroleum Production Pioneers, were presented with scrolls of appreciation at the fifth anniversary meeting of the association.

Stanley G. Wissler, chief paleontologist for Union Oil Company on the Pacific Coast, is now chief geologist for the firm in charge of exploration in the district.

William E. Kennett, Superior Oil Company, is new serving as geologists supervisor at Los Angeles. He formerly was district geologist for the company in the Paso Robles area.

Edmund C. Babson, Union Oil Company, spoke on "Reservoir Performance," and J. R. Pemberton, consulting geologist, talked on "The Columbian Situation" at the geological forum of American Association of Petroleum Geologists at the meeting in the Ethyl Auditorium. J. G. Hathaway, Western Oil Corporation, presided.

Herbert J. Weeks, Sun Oil Company geologist, estimated that there are between 10,000 and 12,000 geologists in the United States. About three-quarters of these are employed by industry, of which about three-quarters work for oil firms, he said.

H. E. McCutcheon, Bud Claffey, Jim Thomas and Dale Haas, officers of the Southern California Gas Company employees golf association, met at the Los Angeles offices recently to formulate plans for the coming year.

ON THE TOUGHEST JOBS, Perfo-Jet assures penetration ... to depths never before achieved. Capable of penetrating multiple strings of cemented casing, Perfo-Jet gives you clean, deep penetration into the all-important *pay-zone formation.* Over and over, operators tell us that Perfo-Jet made possible a "producer" beyond expectations. In some cases, Perfo-Jet opened the formation after other methods failed. To get on pump fast ... with assured penetration ... specify Perfo-Jet. Call in a BJ Service Representative for preliminary discussion. His help in the planning stages can save you time and money.

AVAILABLE on a 24-hour basis. Extensively trained crews. Outstanding equipment. Call today for complete information ... or write for the new Perfo-Jet Bulletin.

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"It's a sure bet!"

Perfo-Jet

Fluor Advances Dieter And Nagel

J. P. Wiseman, Vice President in charge of sales for the Fluor Corporation, Ltd., Los Angeles, announces the appointment of George H. Dieter to General Sales Manager, Los Angeles, and R. E. Nagel to Assistant Sales Manager in charge of Fluor's Chicago sales office.

George H. Dieter

George Dieter has been associated with Fluor since 1940 and has served in such capacities as Assistant Project Engineer, District Sales Engineer, and Manager of Manufacturing Sales.

R. E. Nagel

R. E. Nagel has been associated with the Petroleum Industry since 1921, when he joined Universal Oil Products Company, Chicago, and was with that company until 1945, at which time he joined the Fluor organization. He was with Fluor until 1946 in charge of the New York sales office.

William King, Electrical Machinery Manufacturing Company, gave an illustrated address on novel inventions at the Southern California Meter Association. The meeting was held at the Rio Hondo Country Club, Downey.

Burr M. Roberts is in charge of the new office at Calgary, Canada, recently opened by Bishop Oil Company of San Francisco. Roberts was transferred from Abilene, Texas.

James R. (Ross) Lynch, Shell Oil Company at San Bernardino, was recently elected vice president of the newly formed San Berdoo chapter of the Society for the Preservation and Encouragement for Barber Shop Quartet Singing in America. He has been actively engaged in group singing for some years.

Thomas W. Simmons, president of Bolsa Chica Oil Corporation and leading industrialist of Los Angeles, spent Christmas in Cairo Egypt. He traveled by plane to Paris on the first leg of the journey and after a few days in Paris, France, continued on to Athens, Greece, where he has an office. He then headed for the famed Sheppard's Hotel in Cairo. After several weeks in the Middle East, Simmons will return home toward the end of January in time to see some of his thoroughbreds gallop at Santa Anita. Simmons is sponsoring important ground water projects in Greece under the banner of his Johnston Pump Company.

George S. Watkins, 74, oil field supplyman for 20 years at Signal Hill, died at Wilmington. A native of Vandalia, Illinois, he came to Fullerton in 1921 and moved to Long Beach in 1927.

More than 100 scientists from Shell research laboratories at Emeryville and Martinez, California, and Houston, Texas, and Wood River, Illinois, were in attendance at the semi-annual research conference. Shell Oil Company and Shell Development Company sponsored the gathering at San Marcos near Phoenix, Arizona. Those present included Dr. M. E. Sharp, president, and A. J. Johnson, vice president of Shell Development. Also on hand were J. H. (Jimmy) Doolittle, F. S. Clulow, C. E. Davis, vice presidents of Shell Oil, and W. P. Gage, vice president of Shell Chemical.

Petroleum Pioneers Hold Annual Business Meeting And Party

Celebrating the successful completion of five years' activity, the Petroleum Production Pioneers met together 700 strong Saturday evening, December 3, 1949, at the Rodger Young Auditorium in Los Angeles.

In celebration of the event, Russ Green, P.P.P.'s president, presented expressions of appreciation in the form of scrolls to the honorary past presidents of the organization from their senior group. First to be so honored was Len Little followed by Frank Hill, Dick Guiberson, and Billie McLaine.

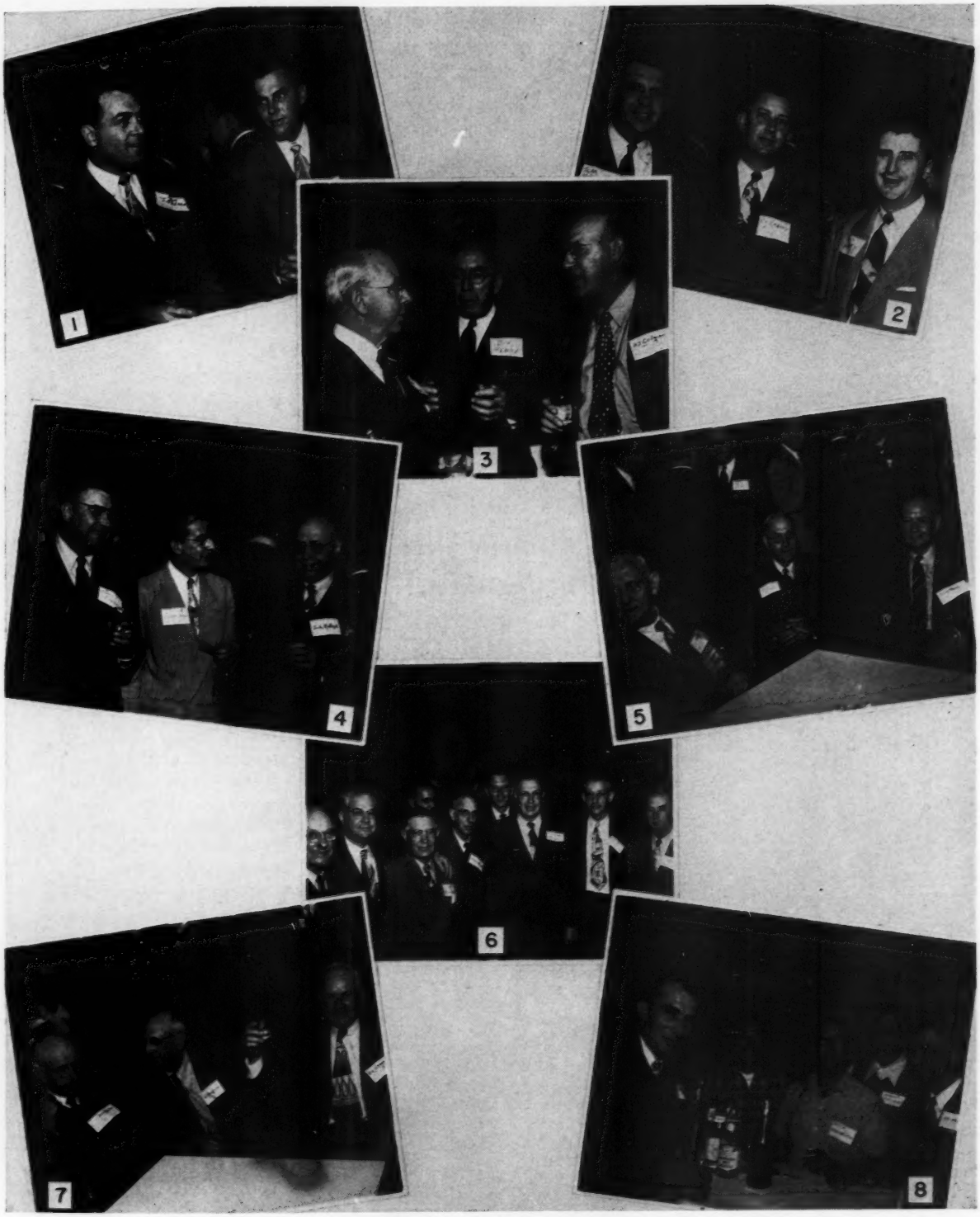
The past vice presidents from the junior group were then presented with scrolls denoting appreciation of the group for the fine work done in the first five years of this organization. First to be presented was Lou Bronson, the Association's first vice president, followed by George Trembley and Elmer Decker.

The usual good fellowship that has characterized the meetings of this group in the past prevailed and several of the real pioneers of the business were introduced from the floor. Excellent food and refreshments were served and as usual the chief topic of conversation was the olden days in the oil business. Musical selections by members of the Pioneers group closed out a very successful meeting.

The officers and members in the group are to be congratulated upon a very interesting and worthwhile five-year achievement, and the oil industry in general looks forward with them to many more years of helping make a real contribution to the enjoyment of California oil men.

AT THE PETROLEUM PRODUCTION PIONEERS ANNUAL PARTY

1. Homer Pyron, Harne Colp, Neil Norris, Jr.
2. Left to right: Bob Cook, Larry Crump,, Earl Cuter, Al Isenor, Joe Schlarb, Dick Winder.
3. Byron Landis, "Tommie" Thompson.
4. Harry Dahl, C. B. Kimberlin.
5. D. C. Mong, "Fat" Martin,, "Mac" Magee.
6. C. J. McLaren, George Sproule.
7. Dutch Zwerneman, Jay Perrin, Chas. Perkins.
8. Bill Clark, Joe Herron.



AT THE PETROLEUM PRODUCTION PIONEERS ANNUAL PARTY

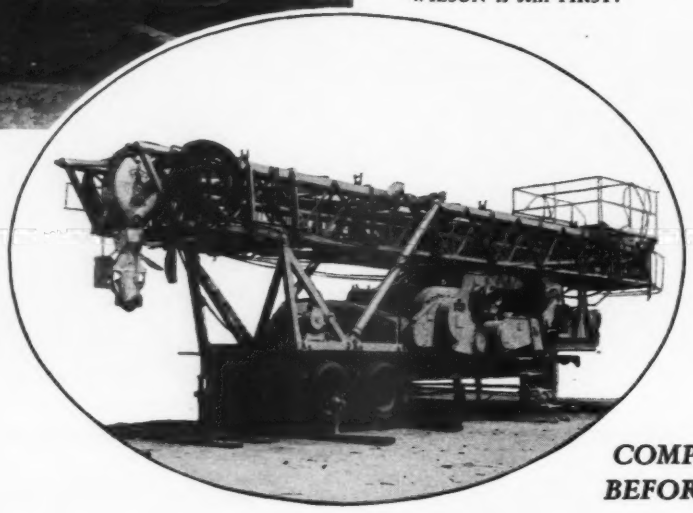
1. Left to right: Jack Skeehan, John McClure.
2. Left to right: Tom Hickey, Ed Embury, Jim Hickey.
3. Left to right: Bob Garbe, Roy Perry, A. J. Colmer.
4. Left to right: Travis Coggan, Florent Baily, Jack Ballagh.
5. Bill Williamson, Frank Hill, Frank Pierce.
6. Al Rosenlieb, Sam Firmlie, Elmer Bolton, Clarence W. Doe, Ray Rosenlieb, Bill Bolton, Henry Pinnell, Lewis Hollingsworth.
7. Left to right: Bill Hanlon, Al Randolph, Ed Stearns.
8. Left to right: (Unidentified), Chas. Perkins, Dutch Zwerneman, George Trembley, A. S. "Doc" Hayes.

REMEMBER WILD MARY SUDIK

Oil covered most of a whole city! Thousands were forced to evacuate their homes. All fires were prohibited. Martial law was proclaimed! The legislature even quit talking!

BUT Wilson *WAS THERE! AND WILSON WAS FIRST!*

WILSON built the first oil field power skid winch in 1927. The Oklahoma City Field was swabbed-in and serviced by WILSON GIANT SKID WINCHES. Thousands of skid winches have been sold since. Often copied, but never equalled, WILSON SKID WINCHES represent the substantial nature of WILSON'S many FIRSTS! Always ready with the new, the unusual, the modern . . . WILSON is still FIRST!



Above: Somewhat antiquated now, but it was a bearcat in its day. It proved its worth at Oklahoma City. The Giant Winch.

Left: Anything but antiquated, the MOGUL TORCAIR is the finest example of the manufacturer's art. Unsurpassed anywhere.

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SERVICE • • • • SALES

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EXCLUSIVE WEST COAST DISTRIBUTOR OF WILSON MANUFACTURING COMPANY

AT THE PETROLEUM PRODUCTION PIONEERS ANNUAL PARTY

1. Left to right: R. P. McLoughlin, Clarence Peck, A. E. Fowks, Ralph Putnam, F. O. Martin.
2. Jim Taylor, Ed Larson, E. F. Cooper, Bill Wiley.
3. J. H. Greenwood, Leo Thiesen, W. W. Barton.
4. Ray Elliott, Dr. "Doc" Findlay, Pres. Drury College, Springfield, Mo.
5. John Isaacs, Bob Burns, Harold Strader, Milo Frency, foreground, Edgar Black.
6. Standing left to right: Unidentified, Jay Perrin, George Trembley, Chas. Perkins; seated, unidentified, Dutch Zwerneman, unidentified.
7. Left to right: Bob Cook, Dan Pinnell, Bill Brooks, Bill Kinder.
8. Paul Andrews, Ed Bartosh, Bill Bettis, G. W. Akers, "Blacky."

be sure... be safe

USE *GENUINE* GARDNER-DENVER PARTS

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only Gardner-Denver parts are engineered especially to match the high quality of Gardner-Denver slush pumps

only Gardner-Denver has the authoritative knowledge to give you maximum value in materials and design

only Gardner-Denver has a vital interest in helping you maintain your Gardner-Denver slush pump at peak efficiency

only by insisting on Gardner-Denver genuine parts can you be assured *protected production* . . . the power and stamina for which Gardner-Denver slush pumps are famous.

GARDNER-DENVER TRAINED SERVICE MEN ARE READILY AVAILABLE TO INSTALL GARDNER-DENVER PARTS

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New York - Chicago - Pittsburgh - Denver - New Orleans

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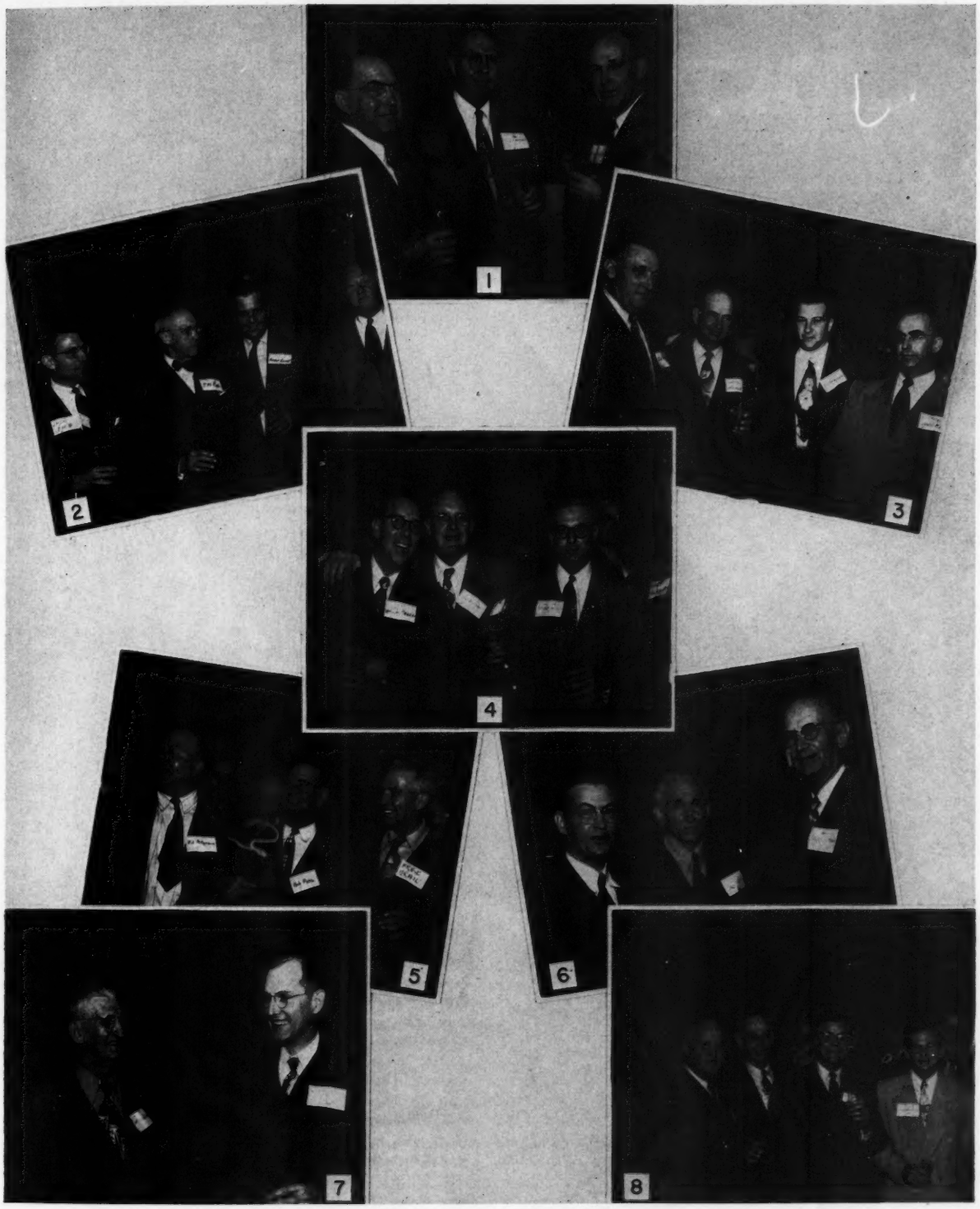
Republic Supply Co. (of Calif.), 2600 S. Eastland Ave., Los Angeles, Calif.



AT THE PETROLEUM PRODUCTION PIONEERS ANNUAL PARTY

1. Left to right: W. T. Launder, E. L. Launder, Kobe Coberly.
2. Left to right: Jack Price, P. M. Price, Lance Lano, Bud Russell.
3. Left to right: Ed Plaugher, Hal Haney, Ed Van Loozen, Milo Webb.
4. Left to right: Spence H. Hillebert, Tom Hickey, Sr., Walter Duhig.
5. Ed Robinson, Bob Pyles, Fred Crail.
6. Clarence Peck, Bill Clark, Ralph Putnam.
7. Wm. Sutherlen, J. Murray Walker.
8. Hearn Paschall, Reed Granger, Travis Coggan, Florent Baily.

Look at Deep Drilling

through one of its greatest aids...

.....and see how necessary the qualities* of **Patterson-Ballagh** Casing and Drill Pipe Protectors become in a really deep drilling operation.

***Patterson-Ballagh Protectors have these outstanding qualities—**

- **Abrasion Resistance**—takes the wear instead of pipe or casing. Reduces friction and chance for twist-off.
- **Streamlined Shape**—hydraulically engineered so as not to interfere with mud circulation.
- **Firm Grip**—stay on pipe even with high bottom hole temperatures. Correctly stressed for maximum life.
- **Resilient Ends**—low stress ends for plenty of reserve elasticity to withstand tearing and cutting action.
- **Extra Length**—reduces unit loading because of greater bearing or contact area. Increases service life.

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With Drilling Contractors

Approximately 160 wells have been drilled at this writing in an area of only 80-acres in the Placerita Canyon field. Some of these drilling jobs were on plots as small as 35-ft. townlots. Of the total wells in the area, Thomas P. Pike Drilling Company alone drilled 40 of them. Fifteen of these holes were for Texas operator, Tevis Morrow, who was one of the early comers in the field. Pike had previously drilled a single well for Morrow at Santa Fe Springs. Evidently impressed by a record for speed and trouble-free operations, Morrow gave Pike contracts which required the operation of six rigs. He also assigned to the drilling organization acquisition and installation of all materials and production equipment necessary to well completions. According to President Thomas P. Pike, the many drilling records which his organization scores is due largely to the fact that operations are carried on under a plan of incentive management with profit sharing. This plan makes every worker a virtual capitalist, he remarked. Consequently, Pike said, crews work to speed production, cut expenses and avoid operational trouble. The result has been lower drilling costs to the operators, with higher profits for the company, stated the oil executive. At a recent company picnic, Pike distributed more than $85,000 in profit-sharing checks among 158 of the employees who had helped to create the profits.

American Association of Oilwell Drilling Contractors has selected Tulsa, Oklahoma, as the host city for the association's 10th annual meeting October 9-10, 1950. Headquarters will be in the Mayo Hotel. The AAODC board of directors has suggested that various committees meet on October 7-8, in order that more complete reports may be made and a greater amount of work accomplished. All hotels in Tulsa have indicated their intentions to cooperate in providing accomodations for visitors.

Fred Manning, a leading California and Rocky Mountain district contract driller and producer, has arrived in Los Angeles by private plane from Denver. Manning recently augmented his flying facilities by the purchase of a latest model Douglas transport plane. Manning, one of the best loved men among the nation's oil fraternity, was in attendance at a barbecue given by his old friend Bill Froelich, long time Los Angeles Ford dealer. Froelich was recently discharged from the Mayo brothers clinic at Rochester, Minnesota, following major surgery. During the motor dealer's stay in the hospital, Manning visited Froelich no less than seven times by flying to Rochester. Manning's obvious devotion to his pal was an inspiring example of real friendship, oilmen observed.

Jack Grant, vice president in charge of California operations for Loffland Brothers, has announced the opening of new offices in the Subway Terminal Building, Los Angeles. The company formerly occupied offices in the Petroleum Building.

The safety committee of the AAODC in Dallas proposed that safety clinics also be initiated in California and tri-state areas at times and places to be announced later.

Union Oil Company reports the current use of nine contract strings of drilling tools, including three repair crews, in its California and Washington field operations.

Rocky Mountain Drilling Company was contractor on Humble Oil & Refining Company's N. L. & F. Co. No. 1 southeast extension well at Del Valle.

Contractor drilling the Lyle A. Garner Brooks No. 1 wildcat at San Canyon is Van Noy Drilling Company of Long Beach.

Under the supervision of Archie Meyers, contractor, the Stublefield No. 1, sponsored by R. B. Jackson in Cuyama Valley, is drilling on down to conclusive depths.

Severns Drilling Company has finished for Union Oil Company Dominguez Estate No. 5 in the Dominguez field. Initial yield from 8030 feet was 720 barrels a day through an 18/64-in. orifice.

Santa Fe Drilling Company is rigging to start the drill in Union Oil's Purisima No. 64 in the Lompoc field.

During 1948 the number of wells drilled in the United States was 19 per cent greater than in 1947 and 35 per cent greater than in 1946. In 1949 substantially as many wells were drilled throughout the country as the year preceding. Each year the average depth of wells is deeper and consequently more costly.

The editor would like to know the name of the portrait painter who did the very excellent picture which hangs in back of the bar at The Petroleum Club.
Certainly this artist has every reason to be very proud of his work and should identify it with his signature.

California Oil World's Monthly Summary

CALIFORNIA DEVELOPMENT AND PRODUCTION

	OCTOBER, 1949, DEVELOPMENT				PRODUCTION	
	Active Drilling Wells	Oil Wells Completed	Initial Production B/D	Oil Wells Completed First 10 Months	Daily Average October 1949	Daily Average October 1948
SAN JOAQUIN VALLEY REGION						
Ant Hill					752	982
Antelope Hills					951	1,413
Bellevue					229	254
Belridge—North	1			2	3,229	3,338
Belridge—South	1	1	13	83	3,506	7,892
Blackwell's Corner					115	128
Buena Vista	2	1	42	10	34,345	44,822
Calder	1			2	213	
Canal					1,898	831
Coalinga Group						
Eastside				16	12,252	19,410
Oil City					78	69
Coalinga—Nose					42,883	54,072
Coalinga—Northeast					5,692	9,726
Guijarral Hills	7	5	2,983	41	11,548	420
Pleasant Valley				1	2,921	3,891
Jacalitos	1			8	5,794	6,668
Westside	2	1	15	22	4,544	7,319
Coles Levee—North				9	17,033	14,683
Coles Levee—South	1				2,014	2,212
Edison	2	3	299	43	10,456	11,717
Elk Hills	7	6	1,445	35	6,764	6,342
Fruitvale	2	3	326	18	8,153	6,583
Gosford, East	1	1	325	12	1,447	
Greeley				1	11,229	13,898
Helm					2,565	3,032
Kern Bluff				38	2,111	2,009
Kern Front				3	5,918	8,667
Kern River		1	12	51	8,290	13,787
Kettleman North Dome	1	1	720	5	30,849	35,215
Lanare					1,169	1,381
Lost Hills				6	5,927	8,385
McKittrick Group						
Belgian Anticline				3	1,357	1,213
Cymric				5	7,987	14,605
McKittrick					719	2,856
McKittrick Front					758	1,953
Salt Creek				2	3,798	4,807
Sheep Springs					595	533
Temblor Ranch				1	64	93
Midway-Sunset	3	3	110	66	30,809	40,647
Mt. Poso Group	1			8	11,346	11,858
Mountain View	1	2	390	9	3,365	3,288
Paloma	6	1	424	12	10,102	12,083
Poso Creek Group				1	1,832	3,593
Pyramid Hills					212	227
Race Track Hill				1	1,817	1,991
Raisin City	2	1	140	9	4,264	2,989
Rio Bravo					10,014	11,986
Riverdale					2,816	2,872
Round Mountain Group				4	6,311	7,189
Russell Ranch	2	5	1,579	77	22,304	4,006
South Cuyama Valley	8	9	3,080	37	6,375	
Strand					630	223
Strand—East					491	372
Tejon Ranch				3	2,192	2,996
Ten Section				4	6,405	5,532
Union Avenue					148	208
Wasco					319	79
Wheeler Ridge				6	765	524
Other Fields	4	5	350	42	2,555	1,530
TOTAL—San Joaquin Valley Region	56	49	12,253	696	385,225	429,399
COASTAL REGION						
Santa Maria District						
Barham Ranch (Los Alamos)						9
Casmalia		1	64	4	289	1,307
Cat Canyon—East				1	53	720
Cat Canyon—West				18	11,770	17,774
Four Deer				2	436	765
Gato Ridge					2,968	3,323

	OCTOBER, 1949, DEVELOPMENT				PRODUCTION	
	Active Drilling Wells	Oil Wells Completed	Initial Production B/D	Oil Wells Completed First 10 Months	Daily Average October 1949	Daily Average October 1948
COASTAL REGION—Continued						
Guadalupe	.....	.....	.....	3	.....	23
Lompoc	.....	.....	.....	.....	33	7,358
Olivera Canyon	.....	.....	.....	2	67	944
Orcutt	.....	1	25	13	4,548	4,478
Santa Maria Valley	.....	.....	.....	4	13,186	19,604
Tinaquaic	.....	.....	.....	.....	6	80
Zaca Creek	.....	.....	.....	5	.....	2,350
Santa Barbara District						
Capitan	.....	.....	.....	.....	2,091	2,207
Elwood	1	.....	.....	2	6,983	7,367
Santa Barbara	.....	.....	.....	.....	38	64
Summerland	.....	.....	.....	1	22	2
Ventura District						
Montalvo West	.....	.....	.....	3	687	892
Padre Canyon	1	.....	.....	9	6,340	7,005
Rincon	2	2	305	7	3,776	3,240
San Miguelito	3	1	2,040	9	5,998	4,332
Ventura Avenue	10	4	2,018	52	59,159	49,432
North Santa Clara Valley District						
Del Valle	2	2	265	18	8,509	10,000
Hopper Canyon	.....	.....	.....	.....	134	141
Oak Canyon	.....	.....	.....	.....	1,642	1,894
Ojai Group	2	.....	.....	11	417	575
Sespe Canyon Group	1	1	112	9	370	163
Temescal	.....	.....	.....	.....	517	528
Others	1	.....	.....	3	51	45
South Santa Clara Valley District						
Aliso Canyon	1	.....	.....	7	3,356	3,593
Bardsdale	1	2	36	12	1,755	1,259
Newhall-Potrero	1	.....	.....	11	8,840	7,775
Oxnard	.....	.....	.....	.....	662	1,177
Placerita Canyon	37	34	11,022	145	27,086	.....
Shiells Canyon	2	1	25	1	780	918
South Mountain	4	4	490	28	6,949	6,394
West Mountain	.....	.....	.....	4	711	878
Others	1	.....	.....	.....	645	1,163
Miscellaneous	4	.....	.....	37	447	742
TOTAL—Coastal Region	74	53	16,402	421	181,357	170,521
LOS ANGELES REGION						
Brea-Olinda	1	2	244	16	13,964	15,518
Coyote—East	.....	2	87	12	4,181	5,138
Coyote—West	.....	.....	.....	16	12,160	15,260
Dominguez	1	.....	.....	4	12,427	12,976
Dominguez, East	.....	.....	.....	1	20	18
Dominguez, Southeast	1	.....	.....	3	332	144
East Los Angeles	1	.....	.....	3	1,297	1,059
El Segundo	.....	.....	.....	.....	360	334
Huntington Beach	8	5	585	77	53,842	57,187
Inglewood	1	1	285	19	14,132	13,242
Lawndale	.....	.....	.....	1	578	1,009
Long Beach	3	2	151	30	22,988	21,099
Montebello	1	1	112	9	6,188	6,592
Newport	.....	.....	.....	3	5,545	6,814
Playa Del Rey	.....	.....	.....	.....	1,619	1,851
Potrero	.....	1	171	6	1,191	1,042
Richfield	3	.....	.....	15	6,458	5,972
Rosecrans-Athens Group	1	1	275	16	6,517	4,539
Santa Fe Springs	3	1	88	3	14,392	14,758
Seal Beach	1	.....	.....	7	11,653	11,530
Torrance	.....	.....	.....	5	7,331	7,706
Whittier	.....	.....	.....	1	511	911
Wilmington	10	10	2,307	131	110,555	131,479
Yorba Linda	.....	.....	.....	2	160	936
Other Fields	1	1	183	11	1,954	1,537
TOTAL—Los Angeles Region	36	27	4,488	391	310,355	338,651
EXPLORATORY						
Outpost Wells	28	.....	.....	.....	.....	.....
Wildcats	17	.....	.....	.....	.....	.....
Gas Wells	6	9	Gas	30	.....	.....
Abandoned Drilling Wells	.....	51	.....	502	.....	.....
TOTAL CALIFORNIA	217	189	33,143	2,040	876,937	938,571

McCullough Introduces New Back-Off Tool

The McCullough Tool Company has just announced a new back-off tool which they claim is an extremely simple and positive back-off method for loosening and unscrewing tool joints and couplings in an oil well without damage to the pipe or joints, it has been in operation for a period of time in the Gulf Coast, Rocky Mountain and Pacific Coast areas, and is now being supplied in Venezuela and Canada.

Final adjustments being made on the Magna-Tector prior to lowering in the hole to locate the stuck point.

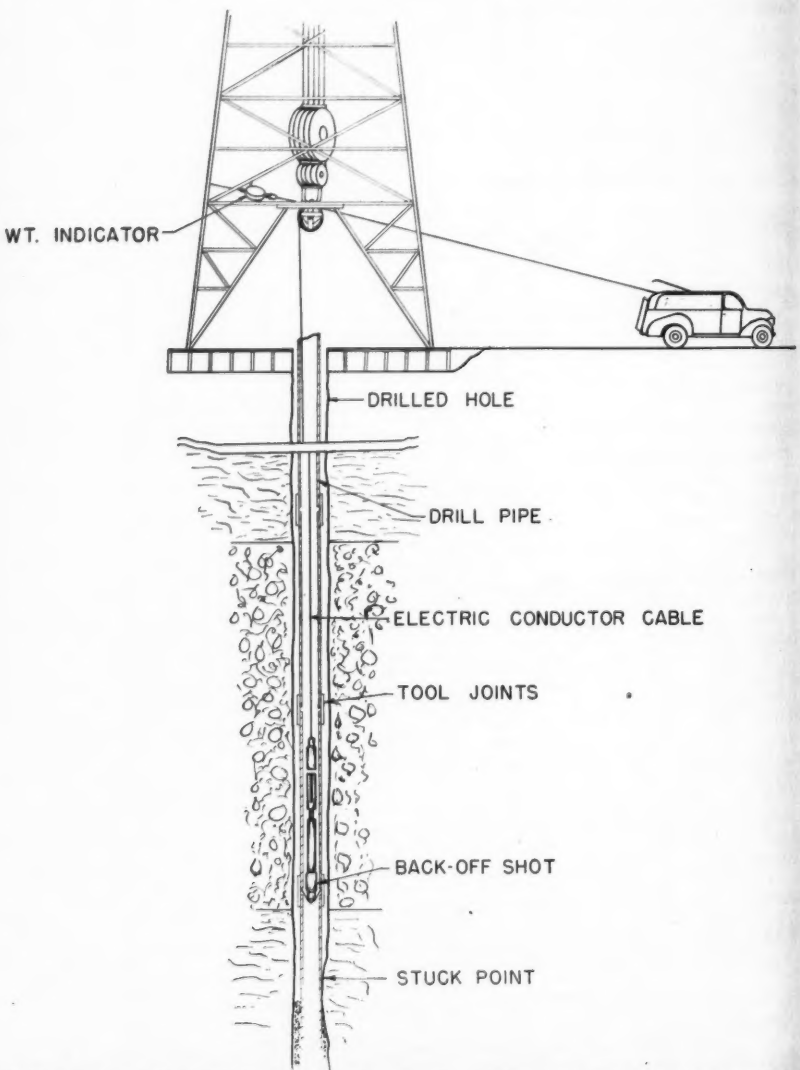
The new back-off tool is a jet device, employing the principles of focusing detonating gases to a beam, permitting the selective loosening of only the desired tool joints and couplings in drill pipe and tubing in an oil well, to facilitate their unscrewing. It is designed and arranged to be run with the McCullough electric service truck and to be fired from the electric control panel in the service truck.

According to the manufacturer the jet back-off tool offers many advantages over any other method of unscrewing joints, such as:

1. All of the shock of the jet back-off tool is confined to the joint to be unscrewed, thereby loosening only that particular joint and eliminating the danger of backing the pipe off in more than one place at the same time and dropping one or more of the pieces alongside of the original fish.

2. Does not split or damage the pipe.

3. Couplings and tool joints are



McCullough Jet Back-Off Tool with firing head positioned in the tool joint, confining the shock to the joint to be unscrewed, thereby loosening only that particular joint and eliminating the danger of backing the pipe off in more than one place at the same time and dropping one or more of the pieces alongside the original fish.

Firing head of McCullough Jet Back-Off Tool with collar finder fingers.

easily and definitely located with the assistance of the McCullough sonic device and electronic weight indicator.

4. It is unnecessary to apply torque before discharging the jet back-off tool.

5. The jet back-off tool loosens the box of a tool joint, drill collar or coupling on tubing, sufficiently, to allow it to unscrew; they are expanded a few thousandths but not enough to damage or hinder their continued use.

6. As many joints as desired may be loosened before backing off the pipe.

7. A considerable saving in rig time is effected, through the speed and efficiency of this device.

The McCullough jet back-off tools are operated on a service basis in the United States and Canada by the McCullough Tool Company exclusively, and in Venezuela by United Oil Well Service Company exclusively. They are sold for export to other foreign fields only. Full information on their use and availability may be had by writing to McCullough Tool Company, 5820 South Alameda St., Los Angeles 11, Calif.

Nevada Leasing Campaign Grows

Approximately 1,000,000 acres of Nevada land have already been leased for oil exploration, the major participants being mostly California operating organizations. The center of activity is in Elko and White Pine Counties of eastern Nevada, about 80 miles west of the Utah border. Continental Oil Company holds about 75 per cent of the ground, all of which is Federal Government land. A. H. Heller, noted geologist, controls a substantial amount of acreage in the play. Union Oil, Standard of California, Barnsdall Oil, Hancock Oil, British American Oil Producing, and Phillips Petroleum are among the other participants. Prospect interest in the area is largely a result of the existence of an immense geosyncline in which occur many favorable-appearing anticlinial folds. Production development is expected from the older sediments, such as those yielding oil in Wyoming, Montana, and New Mexico. Because of the general lack of favorable seeps and other indications of the presence of oil, the area is looked upon with pessimism by some oilmen. Near Elko, however, many oil shade beds exist. A small number of scattered asphalt seeps which were known and reported on as early as 1908 are also in evidence. The territory under lease is about 50 miles wide and 100 miles long and lies largely between the towns of Ely and Eureka. The town of Hamilton in the center of the ground under lease, was once one of the most famous silver producing camps of Nevada. Now a ghost town, it is frequented by tourists. Government land in the state is leased for a fee of 50 cents an acre for the first year, with the second and third years free. Fee in the following two years is 25 cents an acre. A 12.5 per cent royalty is paid to the Government upon the uncovering of gas, oil, or other minerals.

Athens Well In

Transcal Drilling Company's new well in the Athens-Rosecrans area is making 28 barrels a day of 31 gravity crude oil. Total depth is 8583 ft. in the well, which is known as Brownstein No. 1 and is located on Sec. 20-3s-13w.

Los Angeles Well Working

In the East Los Angeles area, Richfield Oil's Edison U. P. Unit No. 1 on Sec. 9-2s-12w is drilling at 2685 ft. The 11¾-in. pipe was set at 898 ft.

Pyles to Address Kettleman-Coalinga Chapter of A.P.I.

Mr. Ernie E. Pyles, president of San Joaquin Valley Oil Producers Association, will address the first meeting of the year of the Coalinga Kettleman A.P.I. Chapter. The occasion will be a 6:30 P.M. dinner meeting at the Polvadero Country Club on January 18. Mr. Pyles will speak on "What is happening to the oil business at home and abroad." He is very qualified to speak on this subject, having just completed a series of visits to domestic and foreign fields and oil producing areas. His appearance at the Coalinga-Kettleman A.P.I. meeting is anticipated with enthusiasm by many in the group who remember his last visit and his pertinent commentary at that time. The January 18th meeting will be conducted by Mr. W. M. "Bill" Lyles, of the W. M. Lyles Company, chairman of the Coalinga-Kettleman A.P.I. Chapter. Arrangements for the meeting are under the direction of J. C. "Jim" Chescheir of The Tretolite Company, vice-chairman in charge of entertainment. Because of Mr. Pyles' popularity as a speaker, and since this will be the first meeting of the new year, a large attendance is expected and reservations should be made as early as possible.

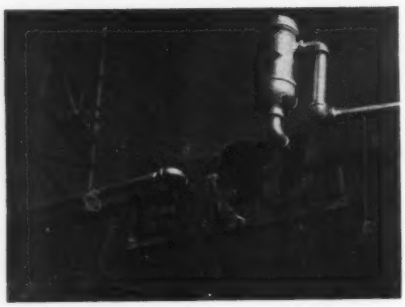
Byron Price, assistant secretary general of the United Nations in charge of administration, has refused an offer by President Truman to name him as Assistant Secretary of State for Public Affairs.

The Treasury revealed money in circulation on November 30 amounted to $183.18 for every man, woman and child. The money in circulation was $27,542,807,135.

Chemical Radiator Cap Controls Scale and Corrosion

By Frank Hornkohl,
Hornkohl Laboratories,
Chemical Consultants to
SirVece of California

The control of Scale and Corrosion in oilfield installations has been a major problem since the advent of both mobile and stationary water-cooled engines. The fact that these units are shuttled from one field to another, and generally in locations where the chemical make-up of the water differs greatly, introduces the importance of properly conditioning the cooling water for the prevention of scale and corrosion.



Close up of SirVece chemical radiator cap installed on Havenstrite Oil Company engine at Coalinga, Calif.

Generally speaking, there are four classes of water with respect to scale formation and corrosion:

1. Temporary hardness type.
2. Permanent hardness type.
3. A combination of temporary and permanent hardness water.
4. Complex silicate-iron-permanent hardness water.

The first type is formed from heat breaking down the soluble Calcium and Magnesium Bicarbonates to their insoluble Calcium and Magnesium Carbonate form. This type of scale is easily removed by the use of inhibited muriatic acid.

The second type of water yields the hard Calcium and Magnesium Sulphate Scale which is more or less impervious to acid treatment and generally requires dual chemical application to remove effectively.

The third type of water forms the combined temporary and permanent Calcium and Magnesium Carbonate-Sulphate scale, which likewise offers serious problems in effectively removing from cooling systems.

The last class of water presents a scale that theoretically can only be removed by hard manual labor.

Mechanic Kuper of Havenstrite Oil Co. holds chemical element for cap on light plant engine. This type of cap is offered by SirVece of California for small enigines employed in well pumping, transfer lines, etc.

Mr. George T. Smith, President of SirVece of California, had this Operator's nightmare of keeping these big units from having cracked blocks, or shutting down operations while the radiator cores were brought into town for cleaning, when he was touring the Oilfields trying to sell a Boiler-Cleaning Job. Everywhere he traveled, it was the Operator's appeal to find some way of treating these units to keep them "on the job."

Thus, after many months of experimentation the chemical radiator cap was developed. If the engine was scaled up, then a chemical analysis of the scale showed the necessary compound to dissolve it. After the scale was removed, a chemical analysis of the water to be used resulted in designing the proper chemical combination to maintain scale-free and corrosion free cooling water.

J. A. (Hap) Brummett, chief mechanic, Northern Division, for K. L. Kellogg and Sons, holds chemical element for SirVece chemical radiator caps serving their engines.

The Chemical Radiator Cap consists of a cylindrical shell extension above the regular radiator cap, or piped into the side of the radiator top pan containing a screen which holds a chemical stick compounded to soften the particular type of water being used, and at the same time to control corrosion. This cap is not intended as a cleaning medium and is not recommended for engines with known radiator stoppage; however, the chemicals employed will dissolve most mineral scale. The latter can be eliminated by natural-flow flushing. For radiator and block cleaning on the job, SirVece of California has a "patent-applied-for" unit that reverse flushes the iron oxide tubercles out of the radiator tubes which in turn are caught by magnets laid in the top pan of the radiator and in the bowl of the unit.

Hoover Drilling Company's chief mechanic, Claude New and toolpusher, Mearl Nay, standing in front of GMC 6-71 twin engines equipped with SirVece pressure system chemical radiator cap. This cap provides for filling the cooling system without removing the conventional pressure cap, thereby insuring complete pressure at all times with treated water.

Six points of invention on the cap are claimed; namely, a means of chemically treating the water as it enters the system; thereby insuring against foaming; trapping all foreign matter before it enters the radiator; providing a means of allowing vapor to escape without the softening of the chemical stick; and, allowing continual chemical feeding to the previously treated water.

To give the Chemical Radiator Cap its most severe test, one of the worst waters was selected, namely,

Coalinga Field Water. It was common practice in this field to have to shut down an engine in less than one week for descaling; to have a cracked head on a brand new engine after less than 3 month's operation; and it was common practice to play a hose on the outside of the radiator to keep it cool so it would last a few more hours.

The water from the Covert No. 1 Lease, R. E. Havenstrite Well in Coalinga, was selected for the test job using a Le Roi 12 cylinder Engine with a total cooling capacity of 50 gallons of water, having an average make-up of 10 gallons per day. Three chemical sticks were used during the 30-day experiment. Analysis of the water at the start of the test and the water from the radiator at the end of the 30-day run are shown in parts per million:

	TESTS IN PARTS PER MILLION Water at start of Test	Water after 30 days Operation
Carbonates	1.5	607.2
Bicarbonates	125.6	890.6
Chlorides	146.8	167.4
Sulphates	952.6	1,394.0
Sulphides	0.0	0.0
Calcium	305.2	10.4
Magnesium	16.7	1.2
Sodium	220.1	1,563.0
Hardness as Calcium Carbonate	831.5	31.0
pH	8.3	9.8

The hardness of the water after the 30-day operation is actually a calculated hardness; however, the tested hardness showed a good suds with just two drops of soap solution. Subject engine operated perfectly during the test period with no evidence of overheating, whatsoever. After the first 24 hours of operation, the sludge from the precipitating action of the chemical stick on the water easily settled out and was drawn off, with a corresponding lesser amount of sludge for each day's operation.

This Havenstrite Oil Company drilling crew at Coalinga, right to left: L. J. Hammons, driller; Cecil Holder, derrickman; H. M. Gilliem, cathead; John Harnhill, pipe racker; and Jack Sackett, lead tongs, saw five of the rig engines equipped with Sir Vece chemical radiator caps without interrupting drilling operations.

The policy of analyzing each new water supply and designing the particular chemical combination for treatment of that water will be followed strictly with all of SirVece of California's operations; thus, there will be no one, three or five chemical sticks for the cooling waters of the California Oilfields, but the particular chemical combination for treatment of each separate water supply.

Thus, SirVece of California has introduced a real innovation, not only to the Oil Industry, but to associated industry by effectively controlling scale and corrosion in the cooling systems of mobile and stationary engines.

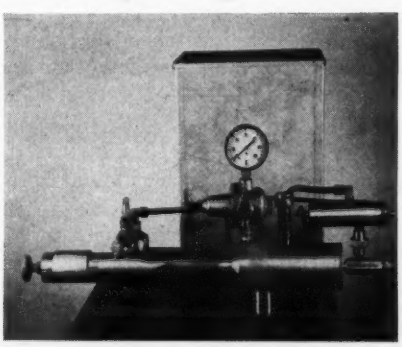
McFarland Introduces New Pump

A new chemical injection pump designed to accurately inject from 2 ounces to 20 gallons of light or heavy fluids over any given twenty-four hour period has been announced by McFarland Manufacturing Company, Houston.

This revolutionary chemical injector eliminates practically every problem and limitation encountered in the field with chemical injectors, according to the manufacturer.

This unique new chemical injector has a fluid range of from two ounces to 20 gallons per day. It has a pump speed range of from 5 to 150 strokes per minute with a normal operating speed of 60 strokes per minute. The McFarland Chemical Injector has an operating pressure range from 0-60 PSI and a normal operating pressure of 30 PSI.

The McFarland Chemical Injector has only two moving parts . . . a main piston and valve. The pump has a positive one inch stroke which provides constant injection of fluid with no loss of motion. The pump is constructed of brass or bronze and is unaffected by temperature changes. Minimum maintenance is assured by the simple design and no special tools are necessary for servicing the pump.



The McFarland Chemical Injector is only 24" long, 5" wide and 12" high. It is equipped with or without a 5 gallon capacity stainless steel chemical tank.

The pump has a 2½" main cylinder and 1¼" return cylinder. Standard pump has a 3/16" plunger with a ratio of 140/1. Pumps can also be furnished with a ¼", 5/16", ⅜", or ½" plunger with a ¼" fluid control plunger.

Accessories include a ¼" Norgren Air Regulator with gauge and a McFarland positive sight feed. Intake and discharge check glands are made of monel.

Complete engineering specifications on this unique chemical injection pump will be furnished upon request by McFarland Manufacturing Company, 1630 Roberts Street, Houston.

LAUGH THIS OFF!!

Small voice in the night in a parked car in Lover's Lane: "Honey, your good conduct medal is scratching me."

Overheard in a night club: "Hands off, Columbus, you've discovered enough for one night."

Many a rich old guy in his second childhood, who considered buying a great big beautiful doll to play with, has realized after hearing the asking price, she was nothing to toy with.

"What would I get," inquired the man who had just insured his property against fire, "if this building should burn down tonight?"

"I should say," replied the insurance agent, "about ten years."

First S. S. Operator: "My wife explored my pockets last night."

Second S. S. Operator: "What did she get?"

First S. S. Operator: "About the same as any other explorer—enough material for a lecture."

Sure, Superman tears down buildings, outraces trains, and smashes everything in his path, but what's so terrific about that? Didja ever see the office gals heading for the dressing rooms at 5:00 p.m.?

She was "Honey Chile" in Dallas,
The sweetest of the bunch;
But on the old expense account,
She was gas, cigars and lunch.

I had a little bunny
His name was Jim
Got sixteen now;
Her were no him.

Mother: "Here's a telegram from Junior."

Father: "Well, did he pass his examinations this time?"

Mother: "No, but he's at the top of the list of those who failed."

There would be more incentive to success if successful men seemed to enjoy life more.

A father met his four-year-old son just as the boy was coming out of Sunday School.

"What did they sing this morning, he asked?"

"I don't know what they were singing, piped the boy, "but I sang 'Too Fat Polka.'"

Glass, china and reputations are easily cracked.

"Why did you leave your last job?"

"Illness."

"What sort of illness?"

"My boss said he got sick of me."

Nobody knows the age of the human race, but we all agree it's old enough to know better.

The negro preacher's term had expired and he was anxious to stay on. "Bruthern," he said, "the time has come fo' you all to elect a pastah fo' anothah yeah. All those favorin' me will please say Aye."

He waited a moment, and then he said, "Silence gives consent. Ise your pastah fo' anothah yeah."

"Katherine, would you tell the class what happens when a body is immersed in water?" asked the science teacher.

"Certainly, the telephone rings."

A man who watches the clock generally remains one of the hands.

Teacher (to tardy student): "Why are you late?"

Bobby: "Well, a sign down there—"

Teacher: "What has a sign to do with it?"

Bobby: "The sign said, 'School Ahead; go slow."

"Daddy, a boy at school said I looked just like you."

"That's nice. What did you say?"

"Nothing—he was bigger than me."

Geared for Profits —that's JENSEN

Because the life of a pumping unit depends on the gear reducer, the gear unit of a Jensen Jack is designed with exceptional care. The one piece housing is made of cast semi-steel, heavily rib reinforced. Heavy duty tapered roller bearings are used exclusively. Helical gears of five and six degree angle and fine pitch combine strength and quietness by meshing many teeth simultaneously. The result: LONGER LIFE —MORE PRODUCTION PROFIT!

There are many other features of the Jensen gear reducer that should be of interest to all producers. Why not see your nearest Jensen dealer or write today to Coffeyville, Kansas, for FREE descriptive literature.

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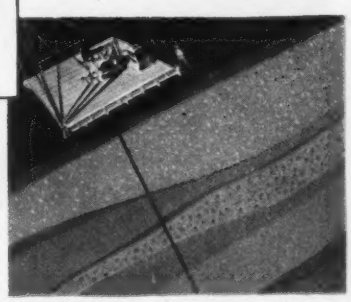
PRODUCTION FOREMEN AGREE... Axelson Deep Well Plunger Pumps, used for over 50 years wherever petroleum has been recovered by mechanical means, give maximum production with less down-time under all well and pumping conditions.

LESS FREQUENT PULLING with an Axelson pump on the end of the string because they are custom-assembled for each specific requirement... Special elements of special alloys to special designs have been developed to successfully meet every problem encountered in the mechanical recovery of petroleum.

"WELL-SIDE" SERVICE ON PARTS AND REPAIRS are available through Axelson Field stores in major California producing areas, and world-wide distributing organizations elsewhere... Complete stocks of parts and accessories in the heart of every major field minimize the down-time between pulling and re-running.

PROMPT ENGINEERING SERVICE is available in every major producing area from Axelson field engineers... Their intimate knowledge of individual well conditions... thorough training in petroleum production methods... complete familiarity with Axelson pumps and accessories, assure personal technical assistance at the lease.



FOR EVERY DEPTH, AND WELL CONDITION there is an Axelson pump combination... of advanced engineering design... produced under rigid metallurgical and quality production control... from Axelson's own alloys for heat, corrosive, or highly abrasive conditions — with complete interchangeability of components.

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